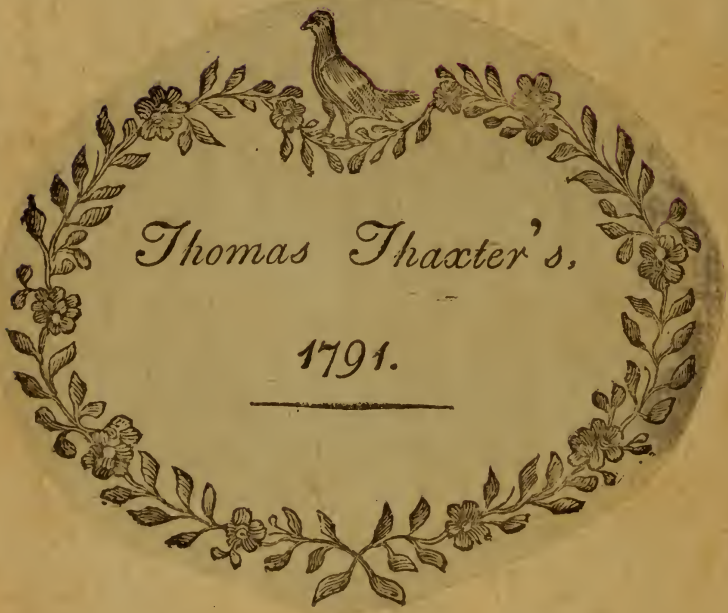
17 L 268



THE NATURE and CURES OF FLUXES.

To which is added,

The METHOD of finding the DOSES of Purging and Vomiting MEDICINES for every Age and Conſtitution of Men; together with the DOSES of theſe MEDICINES in common Uſe.

The THIRD EDITION.

By *W. COCKBURN*, M.D. F.R.S. and of the College of Phyſicians in *London*.

Illud ante omnia ſcire convenit, quod omnes Medicinæ Partes ita connexæ ſunt, ut ex toto ſeparari non poſſunt. Celſ.

LONDON:
Printed for JOHN CLARKE at the *Bible*, under the *Royal Exchange*, *Cornhill*.
M.DCC.XXIV.

BOSTON MEDICAL
DEC 4 1903
LIBRARY
2188

Invicto Principi

GULIELMO III.

Magnæ Britanniæ, Franciæ, Hiberniæ, &c.

REGI AUGUSTISSIMO,

Imperio maximo, Exemplo majori,
Patriæ laborantis vindici, liberatæ Patri,
Imperii Britannici Patrono perpetuo,

DIATRIBEN hanc in Classium ac Exercituum Emolumentum Sacratam voluit

GULIELMUS COCKBURNUS.

To the Right Honourable,

James *Earl* Berkeley, *First Lord Commissioner*,

Sir John Jennings, *Knt.* *Sir* John Norris, *Knt.*
John Cockburn, *Esq*; *Sir* Charles Wager, *Knt.*
William Chetwynd, *Esq*; Daniel Poultney, *Esq*;

Lords Commissioners for executing the Office of Lord High Admiral of Great Britain, Ireland, *&c.*

My Lords,

I Flatter my self that your *Lordships* will give this Book a favourable Reception, because it renders my *Medicine* for curing *Fluxes* more efficacious, without its undergoing any Change in its Composition.

His late Majesty, of glorious Memory, being well acquainted with the Difficulties even victorious Armies have to encounter

counter from that common Enemy, vouchſafed to thank me after a very particular Manner.

Your Lordſhips too being apprized of the long and continual Succeſs of that Medicine in curing Fluxes, in the Royal Navy, have already ſhewn a great Inclination to preſerve the Medicine for the Service of future Ages, which your Predeceſſors had protected with great Caution, and with Prudence reared up: *A Medicine ſo beneficial to Seamen in a Diſeaſe they are ſo much incident to, eſpecially in warm Climates, that you are deſirous that it ſhould be conſtantly ſupplied to Ships bound on foreign Voyages; and that all his Majeſty's Ships, that are to be fitted out for*

the

the Mediterranean, *or the* Indies, *be furniſhed from Time to Time with the ſame Proportion of Medicine they were formerly ſupplied with.*

And now, my Lords, as this Book informs your Surgeons of the moſt proper Times for adminiſtring my, and every other, Medicine, in every particular Flux, as well as of the moſt proper Quantities of them; ſo your Lordſhips muſt believe the Book both uſeful and neceſſary, and not unworthy of your Protection.

I affirm to your Lordſhips what is fully proved in the following Book, that Phyſicians have made little or no Improvement, either in the Speculative,

or

or practical Part of this Diſeaſe, ſince the firſt and earlieſt Times of Phyſick, and I may juſtly obſerve, that they cannot be ſuppoſed to have provided againſt Evils they did not apprehend: And therefore, my Lords, the Royal Navy is not only provided with the beſt Medicine that is for any Diſeaſe, but your Surgeons are now better able to adminiſter it, or any other Medicine, for the Cure of Fluxes, than the greateſt Number of Phyſicians in this, or in any former Age. I am, with great Reſpect,

My Lords,
Your Lordſhips moſt humble
and faithful Servant,

W. COCKBURN.

To the Right Honourable

James *Earl* Berkeley,
First Lord Commissioner,

Sir JOHN JENNINGS, *Knt.*
JOHN COKBURN, *Esq;*
WILLIAM CHETWYND, *Esq;*
Sir JOHN NORRIS, *Knt.*
Sir CHARLES WAGER, *Knt.*
DANIEL PULTNEY, *Esq;*

Lords Commissioners for Executing the Office of Lord High Admiral of Great Britain, Ireland, *&c.*

My LORDS,

I Flatter my self that your *Lordships* will give this Book a favourable Reception, since it

A renders

renders a *Medicine* for curing *Fluxes*, which has been hitherto uſed with great Succeſs, more efficacious, without its undergoing any Change in its Compoſition.

His late Majeſty, of glorious Memory, being well acquainted with the Difficulties even victorious Armies have to encounter with from this Diſeaſe, was pleaſed to thank me in a very particular Manner.

And as Your Lordſhips Predeceſſors, after a ſtrict Examination, approved and eſpouſed

eſpouſed this Medicine; ſo the long and continued Succeſs of it in the Royal Navy has already induced Your Lordſhips to recommend it to the Service of future Ages, as *a Medicine ſo beneficial to Seamen in a Diſeaſe they are ſo much incident to, eſpecially in warm Climates, that you are deſirous that it ſhould be conſtantly ſupplied to Ships bound on foreign Voyages; and that all his Majeſty's Ships, that are to be fitted out for the* Mediterranean, *or the* Indies, *be furniſhed from Time to Time with the ſame Proportion of Me-*

dicine they were formerly ſupplied with.

Since then, my Lords, this Book informs your Surgeons of the moſt proper Times for adminiſtring this and all other Medicines, in every particular Flux, as well as of the proper Quantities of them; 'tis hop'd your Lordſhips will look on this Book as uſeful and neceſſary, and conſequently not unworthy of your Protection.

I affirm to your Lordſhips what is fully proved in the following

lowing Book, that Phyſicians have made little or no Improvement, either in the ſpeculative, or practical Part of this Diſeaſe, ſince the firſt and earlieſt Times of Phyſick, and I may juſtly obſerve, that they cannot be ſuppoſed to have provided againſt Evils they did not apprehend: Whereas now, my Lords, the Royal Navy will not only be provided with the beſt Medicine hitherto found out for this Diſeaſe; but your Surgeons will be as well inſtructed how to adminiſter this or any other Medicine for the Cure of Fluxes, as the ableſt

Physicians have been in any former Age. I am, with great Respect,

My LORDS,

Your Lordships most humble

and faithful Servant,

W. Cockburn.

THE PREFACE.

Whoever conſiders the great Changes and Improvements in this Edition, will not wonder that I give rather a new Book, than a new Edition of a Book formerly publiſhed. The real Difficulty of the Subject, the great Imperfection of all former Methods of inveſtigating Diſeaſes, have been chiefly the Cauſe of that Obſcurity, and of the Defects, that are at preſent to be cleared up. Every ſimple and eſſential Looſneſs

muſt be diſtinctly deſcribed; every complicated and ſymptomatick Looſneſs *muſt be clearly deduced from its original and primitive Diſeaſe; both of them muſt be brought back to their proper and peculiar* Cauſes; *all of them muſt be* cured *in the moſt natural Method; and the Medicines, ſuggeſted by the beſt Method, muſt be adminiſtred in the moſt proper Times of every* Looſneſs.

In order then to attain this deſirable End, I have inveſtigated the Looſneſs *in the ſame Method I formerly did the* Gonorrhœa; *both becauſe of the Succeſs I then found by this Method, and that it is allowed to be the moſt natural, and the beſt adapted for making great Diſcoveries in Phyſick of any other, hitherto employed for that Purpoſe. I beg Leave to relate the Opinion of the Famous and Elegant Phyſician,*

cian, [*] *Dr.* Lanciſi, *who, writing of my Book of the* Gonorrhœa, *thus expreſſes himſelf concerning this Method of inveſtigating Diſeaſes.* Ac proinde non dubito, quin, quod Tute in Epiſtolâ Nuncupatoriâ aſſeris; Datis alterius cujuſcunque morbi Symptomatibus, ejuſdem etiam natura, iiſdem plane modis, quibus ad *Gonorrhœam* perveniſti, facile erui atque explicari in poſterum poſſit.

Habeo itaque quod non Tibi ſolum gratuler, ſed etiam univerſæ Medicorum reipublicæ, &c.

The Succeſs of this Method with the Gonorrhœa *is every where acknowledged; and that we may reaſonably expect the like Succeſs from it in every Diſeaſe will appear, if we conſider, that the Symptoms of every Diſeaſe are the Effects only of ſome Cauſe, or of ſome Numbers of Cauſes that pervert and*

[*] Romæ Idibus Januarii, 1717.

overturn

overturn the natural Action of one, or of more Parts. By explaining then these Symptoms, we become appriſed of the perverted Action; or, which is the ſame Thing, we diſcover the Nature of that Diſeaſe.

Having thus the Nature of any Diſeaſe, we may determine the Cauſe of that Diſeaſe; for nothing can be the Cauſe of a Diſeaſe, that does not produce the Symptoms, whereof the Nature of the Diſeaſe conſiſts.

The Nature of a Diſeaſe being aſſigned, we have the Method of curing it. Having likewiſe the Nature and Cauſes of any Diſeaſe, we may determine how far the Diſeaſe is curable or incurable.

And therefore the Symptoms of any Diſeaſe being given, its Nature may be diſcovered; *and from that, the Probabilities for curing any Diſeaſe, and the moſt proper Methods of curing it.*

The

The Reaſonableneſs of my Method of inveſtigating Diſeaſes being thus briefly ſhewn, I proceed to mark out a few Inſtances of the Succeſs of it, in inveſtigating the Doctrine of a Looſneſs; *and that Phyſicians may be better apprized of this Succeſs, I will ſhew it from the Plan Dr.* Sydenham *thinks would compleat the Practice of Phyſick; for, as far as I can ſupply and fill up his Wants and* Deſiderata, *ſo far my Search and Inquiry muſt be perfect in the Judgment of that ſagacious Phyſician.*

Dr. Sydenham *mentions two Things, which he thinks neceſſary for* improving Phyſick. *One of them is a* Hiſtory of Diſeaſes, *or a natural and graphick Deſcription of Diſeaſes. The ſecond is the* Practice of Diſeaſes, *or a conſtant, fixed, and compleat Method of Cure.*

He

He would, in this Hiſtory, have Diſeaſes brought into their proper Tribes, in that Manner, and with that Accuracy and Exactneſs he thinks Botaniſts have ranged their Plants. At this Time every philoſophical Hypotheſis ought to be ſet aſide, that may preposſeſs the Judgment of an Author; but that the genuine and obvious Symptoms be only recorded, however ſmall and inconſiderable they may ſeem, and appear to be.

Thirdly, the Doctor thinks it neceſſary, while Diſeaſes are deſcribing, that the conſtant and proper Phænomena *be only recorded; and that they be parted from thoſe that are foreign and accidental.*

And laſtly, in order to complete a true Hiſtory of Diſeaſes, Dr. Sydenham *would have the Seaſons of the Year obſerved, together with the* Diſeaſes *that happen in every Seaſon.*

Sydenham *lays so great a Stress on a History of this Kind, that he thinks Physicians may as truly and securely draw* Indications, *for* curing *Diseases from their minute Circumstances, as they do at present draw from them the* Diagnostick *Signs of Diseases. But the Difference is vastly great, as will hereafter be made appear.*

The Result of all this History he hopes might be, that constant, fixed, and complete Method of curing Diseases, the last and other Branch of his Scheme for perfecting the Practice of Physick. The Doctor farther represents the Nature of his Method, that it must be supported and strengthened with a great Number of Experiments, sufficient to conquer this, or the other Disease. But as he is sensible of the Obscurity of this Assertion, he tells us farther, that what he contends for, is, that we ought to be as sure, that an assigned Disease

Diſeaſe will be cured by ſatisfying certain Indications, *as we are ſure of theſe* Indications *being anſwered, and executed by certain and aſſigned Medicines; which Medicines anſwer the Wiſhes of the Preſcriber for the moſt Part, tho' they do not anſwer them every where, and at all Times.*

Now to begin with the firſt Branch of Dr. Sydenham's Scheme *for improving Phyſick; we muſt confeſs, that the firſt and ancient Phyſicians, whoſe Books are known to Phyſicians, have very near finiſhed and completed this Requiſite of Dr.* Sydenham. *The Deſcriptions of Diſeaſes given by* Hippocrates, *a Perſon diſtinguiſhed by his great* Eloquence, *and ſuperior Skill in Phyſick, are ſuch excellent Pictures of Nature, that they have been admitted through all ſucceeding Ages, becauſe of the great Reſemblance they were always found to have to the Originals they ſo*

ſo truly repreſented. And that Phyſician is a great Stranger to his Hiſtory of Diſeaſes, or his Epidemicks, *that is not ſenſible of the great Accuracy of* Hippocrates *in obſerving the* Seaſons *of the* Year, *and the Diſeaſes that are moſt common in every Seaſon.*

Neither have ancient Phyſicians been wanting in ordering and ranging the various Diſeaſes into their proper Families *and* Tribes: *Theſe Phyſicians have only taken the ſame Method with* Plants, *they had from the Beginning employed about Diſeaſes; and whoever underſtands the State of the ordering* Diſeaſes *and* Plants, *muſt acknowledge, that the different Species of Diſeaſes are more accurately comprehended under their general Heads, than* Plants *are ſtill, after the great Application of* Botaniſts, *for the laſt hundred Years.*

This I thought proper to be observed without any Design either of derogating from the Learning of Dr. Sydenham, *or of suggesting the writing Histories of Diseases unnecessary, but that Ancient Physicians may have Right done them; and that Physicians, who would inform themselves of the Histories of Diseases, may know where to learn them; and by comparing them with Nature, they may improve, confirm, and continue this most useful and excellent History.*

Dr. Sydenham *very justly recommends to us, the setting aside every Hypothesis in compiling the History of Diseases: A Task that has hitherto proved very difficult, but what the Doctor himself has not performed. It is very plain we do not copy Nature, while we paint an* Hypothesis *we frame of her; and the Picture must prove unlike when both are compared together. Yet Physicians,*

ſicians, in all Ages, have failed, more or leſs, by being too early with their Philoſophy.

It might be proper on this Occaſion, to ſhew the Method ancient Phyſicians took, in giving Names to the different Diſeaſes; but I ſhall only repeat what a learned Phyſician briefly ſays of their Method. Sed quum ipſi rudem adhuc & incultam rerum cognitionem haberent, nomina Morbis confinxerunt, non ex rei Eſſentiâ cui primum & maxime medemur, ſed ex eo quod fortè primum occurreret.

That I may not enter then upon this Subject at preſent, the Deſcriptions *given by ancient Phyſicians not being always perfect; tho' more ſo than is abſolutely neceſſary for our inveſtigating the* Nature *and* Cures *of any Diſeaſe; and there is very little wanting to be added on that Head, and the great*

Defect is in the Physicians, who have not made a proper use of their Observations.

The manifest Errors in the Descriptions and Histories of Diseases do not more frequently occur in any other Disease, than in the Cases of Fluxes. *The Supposition of an* Ulcer, *in the Description of a* Dysentery, *destroys the Simplicity that is required in Descriptions, and is grounded upon a false Piece of Philosophy; the Necessity,* viz. *of an* Ulcer *where there is so much* Griping: *this Necessity being neither a fair Consequence, nor conformable to Experience, but what must mislead Physicians in the Practice of that Disease.*

However pernicious this one Mistake may prove, yet Multitudes of Errors may be found in the modern Accounts of a Dysentery; *greater Numbers being added to the mentioned* Hypothesis *of an* Ulcer. *The* Diagnostick *Signs of a* Dysen-

Dyſentery *are clouded with ſome Defects, that have, hitherto, render'd it impoſſible to be diſtinguiſhed from the* Teneſmus, *or the* Piles, *by Phyſicians; which Imperfection being remedied in the following Account, it is no longer difficult to part each of theſe Diſeaſes from one another.*

The Diagnoſtick *Signs of a* Lientery *and of the* Cœliack Affection *have been ſo few, and ſo perplexed, that we find them excluded from among the* Species *of a* Looſneſs, *by one of the greateſt Phyſicians. Indeed the* Deſcriptions *we find of thoſe Diſeaſes in almoſt every Book of Phyſick, do not properly diſtinguiſh them from a* Diarrhœa; *and the* Scars *on the* Guts *are not more juſtly rejected from being the Cauſe of the* Cœliack Diſeaſe, *than ought the imaginary* Slime *of Dr.* Pitcairn. *I hope* I *have reſtored the* Lientery, &c. *to their Ranks in a* Looſneſs, *and that*

I have clearly ſhewn the Difference between them and a Diarrhœa.

But the Hiſtory of the mentioned Species *of a* Looſneſs *often conſiſts of falſe Articles and Particulars; and though the* Diarrhœa *is perfectly enough deſcribed, yet its Hiſtory is more defective than that of the* Dyſentery; *the* Symptoms *of a* Diarrhœa *being ſubdivided into a great many new* Species *of that Diſeaſe. So* frothy *Stools conſtitute a new* Species *of a* Diarrhœa. *The miſtaken* Mucus *of the* Guts *occaſions the* Fat, *or* Colliquative Diarrhœa; *while the watry Stools (a true Species) is hardly known. But as, in the following Account, we find the* Nature *and Eſſence of every* Looſneſs *demonſtrated from their* Diagnoſticks; *ſo we may likewiſe find the* Seat *of every* Looſneſs: *We may diſcern the præternatural Affection of that* Seat, *that conſtitutes every particular* Looſneſs:

We

We are apprized of the Means that produce this Affection; and whether they be Cauſes, *that more immediately affect the* Seat of a Looſneſs, *or that this Affection has its Origin in ſome diſtant and remote Parts, from whence it is conveyed into the* Guts, *the* Seat *of the Diſeaſe; which Diſcovery has been much deſired by Phyſicians.* Fernelius *excellently ſets forth this general Want in theſe Words,* Equidem nunquam ullum plane cognitum penituſque perſpectum Morbum eſſe putaverim, niſi compertum habeatur & quaſi oculis cernatur, quæ in humano corpore ſedes primario laboret, quis in ea ſit Affectus præter Naturam, unde is proceſſit; utrum ea ſede genitus κατὰ πρωτοπάθειαν, an aliunde profectus κατὰ συμπάθειαν; an denique Cauſa aliqua interior illum foveat. Hæc enim ſingula certis ſignis ſcrutari & inter-

noſcere oportet qui recte valet Morbis mederi.

From the preſent Account of a Looſneſs *ariſe Diſcoveries of another Kind than thoſe that more immediately concern it, or the different Species of it. For Diſeaſes have that ſurpriſing Analogy to one another, that we cannot find the Nature of any one Diſeaſe, without the Nature of ſome other being made manifeſt thereby. The* Nature *of a* Looſneſs *being thus diſcovered, we learn the Nature of the moſt grievous Diſeaſes that afflict the* Guts. *Thus from the Account of a* Diarrhœa, *the* Lientery, &c. *not only the Nature of the* Cholera Morbus, *of the* Bulimus *and* Colicks *become manifeſt, but we are informed about the Nature of the* Piles, Teneſmus, *and of every Diſeaſe incident to the* Stomach *and* Inteſtins.

From

From true Accounts of Diſeaſes we may ſatisfy the Publick about the Cauſes of Epidemick *Diſeaſes, and of the* Vigour *and* Strength, *in which, from Time to Time, they ſhew themſelves; becauſe a* Mortality *may be owing as often to the Practice of Phyſicians, as to the Strength and Violence of the Diſeaſe, which may be clearly diſtinguiſhed by a genuine Account of Diſeaſes.*

Scholium; *This laſt Conſequence appriſes us of the Nature of* Anamneſtick *Signs, unknown to any Phyſician, beſides the great* Hippocrates; Galen, *nor any other of his Commentators, conceived the Meaning of the great Phyſician, when he talks of bringing back to the Knowledge of the Sick, what had already happen'd in a Diſeaſe, but what had eſcaped their Notice, or Obſervation.*

We find how difficult it is to give a graphick Hiſtory *of any Diſeaſe. Nothing ſeems ſo eaſy as to relate the Hiſ-*

tory of any Case, that passes under the Care of a Physician: Nothing appears indeed to be so easy, but nothing is so difficult, because nothing is so hard as to collect a Disease from the Sick. Painting from the Life is not harder than describing the Diseases of the Sick: But all this Difficulty is removed in my Method of investigating Diseases; and thus is one Desideratum *of Dr.* Sydenham *supply'd.*

Some of the best modern Physicians fail particularly in this Article of writing the Histories of Diseases. It is very remarkable, that two learned Physicians have given us a very false Account of a Diarrhœa *which happen'd in their own Time. The Doctors,* Willis *and* Sydenham, *both agree, that a* Looseness, *they call an* Unbloody Dysentery, *held* London *a great Part of the* Summer, *and all the* Autumn, *for three Years,* viz. 1669, 1670, *and* 1671; *both*

both call it Dyſenteria incruenta ; *yet the Accounts they give of it are not only different, but likewiſe contradictory, as I have particularly ſhewn in this Book ; and therefore they could not both be true. But if we compare theſe Accounts either with the Hiſtories of the Ancients, or if we compare them by my Method, we may find that each of their Accounts is defective, and that both their Accounts being put together, make up the true Account. So difficult a Matter it is, to hand down the Hiſtories of Diſeaſes to Poſterity.*

Is this ſo very difficult, that theſe great Phyſicians were not able to collect, in three Years, the Courſe of a very obvious Diſeaſe that was Epidemick *for almoſt the half of that Time ; what Miſtakes in the practiſing Phyſick unavoidably happen to the greateſt Number of Phyſicians, that are moderately inſtructed in the* Diagnoſticks *of ancient Phyſi-*

Physicians? This is terrible to consider, and ought rather to be left to the Consideration of every Physician, than to be published.

Sir Richard Blackmore, *a very eminent Physician, has been so very inaccurate both in describing, and in giving us the History of* Fevers, *and of the* Small-Pox, *that some People would almost question, whether he had ever seen either of these Diseases, if we that are his Contemporaries did not remember his large and extended Practice.*

In his Treatise of the Small-Pox *we have this Account of a* Fever, *that it is* an inordinate Elevation of the oily, or fiery Parts of the Blood, by which the Balance of Power between the active and governing Principles, being broken, a great Tumult and Disorder arises in the animal Oeconomy, attended with immoderate Heat and Thirst, too high, and often

ten too swift a Pulse, Headach and Sickness of Stomach. *This Description is vastly unlike those of* ancient *Physicians, and void of all the Simplicity his great Pattern,* Dr. Sydenham, *requires. In the Stile of this Physician, this Description is a* Chymico-poetico-politico-physico-Finition, *that does not comprehend the Thing he would define; which last Error does not fall under our present Consideration.*

His History too of the Small-Pox *materially differs from* Nature, *and from* Sydenham, *to whom he appeals: But to instance in one Particular only,* Sydenham *tells that the* Small-Pox, *the* regular *especially, and* distinct, *are without a* Fever, *and other grievous Symptoms, on or about the fourth Day; and that there is no more Fever till about the ninth, which he calls the ripening Fever.*

Sir

Sir Richard, *on the other Hand, ſpeaking of this very Fever, tells us, as if it were plainly to contradict the former, that* it muſt be acknowledged, that there is but one and the ſame continued Fever from the Beginning, according to the ſeveral Stages of the Diſtemper, and the different Exigencies of Nature.

Now I will not pretend to declare what Occaſion Nature may have for a Fever in the Small-Pox: *Sir* Richard *tells us he is in the Secret; but for my Part, I always found the* Small-Pox *without a* Fever *wanted a Phyſician the leaſt, which* Nature *could overcome without an Alliance; to keep up to the Language of my Author. But I believe it is now very plain, that the Account given by theſe two Phyſicians, and that, in an eſſential Article, is widely different. So we find that it is not a very eaſy Matter to relate the*

Hiſtories *of Diſeaſes, which is all I am obliged to remark on this Occaſion.*

Too many Examples might be brought to confirm this Obſervation. But I chuſe to paſs from this diſagreeable Subject, to that ſingular Obſervation of the learned Doctor Freind, *concerning the* Small-Pox, *by him called* Verrucoſe; *they being equally ſingular and ſurpriſing: By this Account Phyſicians are informed of, and guarded againſt, ſuch ſtrange Appearances, which have either been altogether overlook'd, or which have not been obſerved for about ſix hundred Years. Theſe Verrucoſe* Small-Pox *come out fairly, and few in Number: Some of them will ſuppurate duly and orderly; but the Suppuration has ſtopped in a Night, and no Corruption ſeen by Morning. They, ſometimes, cannot be brought to Suppuration, and will run on nine Days with*

with a slow Fever, *as I have found this last Year. I ingenuously confess my Surprize, and the Difficulty I at first had about the Measures I was to take; and though I was not under any doubt of my Distemper, I should have had great Satisfaction in knowing the Cases mentioned by Dr.* Freind *in his Letter, to which I refer my Reader, who may thereby be guarded against any Surprize. But I must observe that this extraordinary Case is related in all the Circumstances of an useful History; and is, on that Account, more valuable than many Books of modern Observations.*

But that I may resume the Thread of my Discourse, and shew my Performances in the third Article *of Dr.* Sydenham's *Scheme (which has not only proved difficult in all former Ages, but to my Author likewise, and to all other Physicians) in separating all* foreign

reign *and* accidental Symptoms *from the* conſtant *and* proper Phænomena *when we record the Hiſtories of Diſeaſes; it is in this Article, that* Hippocrates *complains of the Deceitfulneſs and Fallacies of* Experience: *For as we find our Experiments prove often falſe, and often* contradictory, *before any great Progreſs is made in obſerving; and that both the true and falſe Obſervations claim an equal Right of being believed, their being vouched by Experience: So Phyſicians always took ſome other Method for correcting their Obſervations, and for rectifying the Errors of Experience.*

Dr. Sydenham *was forced upon the Practice of Phyſick without any Knowledge of the Experience of preceding Ages, and is little apprized of the Fallaciouſneſs of Experience; ſo that he entertains great Expectations from the Method he propoſes, but without any Reaſon. He thinks*

thinks Physicians may as truly and securely draw Indications *for curing Diseases from their minute Circumstances, as they do, at present, draw the* Diagnostick *Signs of Diseases. The Doctor did not know that this had been the fruitless Labour of more than two thousand Years, and of Men of* Greece, *and of* Italy, *from which all Inventions and Learning have been conveyed; and he had too good an Opinion of Men in these times, to think in one Age he could go farther in observing than they had in so many former Ages.*

Besides he does not seem apprized of the different Nature of Diagnosticks *and* Indications: *These are Conclusions, and they a Collection of Particulars only; so that* Diagnostick *Signs are the proper Business of* Observation; *but* Indications *arise from our reasoning upon Observations, as will often appear in the following Book. Moreover,*

over, there lies a great Waſte between the Hiſtory of Diſeaſes propoſed and the Practice of Phyſick, though we had the Skill of ſeparating the permanent *Symptoms of Diſeaſes from the caſual and adventitious.*

But not to begin again with what has already been perfected: learned Phyſicians muſt proceed to confirm the Works of their Predeceſſors, and to add ſome farther Degrees of Perfection in their own. On this View, I have explained the various Symptoms *and* Signs *of a* Looſneſs; *and in this Explanation every Caſual and Foreign Symptom is parted from the Conſtant and Permanent. The Method of this Separation cannot be better compared than to the parting of Gold alloyed with baſe* Metals; *eſpecially if we conſider the Method: For as theſe may be diſcerned aſunder and apart in the Fluxion; ſo do the conſtant Symptoms appear aſunder from the Caſual, in the Explanation.*

The principal Symptoms *are the moſt eaſy to be explained, but theſe falſe Symptoms are moſt commonly found among the* ſecondary *Sort; and are ſometimes Symptoms only produced by theſe; or they are* Symptoms *of Symptoms only; and ought therefore to be rejected from among the Number of Symptoms that belong to the Diſeaſe. Such* Symptoms *I have particularly detected in explaining the* Cœliack Affection, *which never could be parted in Ages of Obſervation. I may then with ſome Pleaſure affirm, that the conſtant and permanent Symptoms of any Diſeaſe may be ſhewn aſunder, from the caſual and even fictitious Symptoms.*

And thus we find ourſelves arrived at the laſt and great Article of Dr. Sydenham's *Scheme; which is the* Harveſt *of Obſervation; we being now to gather Fruits, that* conſtant, fixed, *and* compleat *Method of* curing *Diſeaſes.* *In*

In the first end earliest times of Physick, we find that vomiting *and* purging *Medicines are only brought into the Practice of Physick, because* Hippocrates *had observed, that a* Diarrhœa *was carried off when it was attended with a Vomiting. But* Celsus *more particularly founds the Practice of* Purging; *yet uses all imaginable Caution in his Recommendation: For he teaches us that a* Looseness *may for seven Days be of use, in case there is not a Fever with it: Two great Cautions against the Goodness of a Looseness, while he recommends purging upon this Observation.* Cœlius Aurelianus *is still more cautious with regard to* purging *and* vomiting *Medicines for the Cure of a Looseness: And* Rhases, Avicenna, *particularly caution Physicians against a* Looseness *that appears in the Beginning of other Diseases; which* Symptomatick Diarrhœæ *have*

always been the most impracticable under the Direction of the best Physicians.

Here we find the Practice of Physick in great Disorder: Physicians must act, but they must avoid being charged losing the favourable Opportunity of curing the sick; tho' they find both the making a right Judgment of the Practice difficult, and the making a Tryal doubtful and dangerous. So that we may properly observe with Celsus *in another Case;* Hippocrates *has informed us of many Cures for a Looseness;* sed eorum Tempora & Causas parum explicuit.

Hippocrates *has likewise instructed us in the use of* Astringent Medicines *for the* Cure *of a Looseness; which many Physicians have affirmed to be the only Medicines that could possibly be useful on that Occasion: But we find* Galen *blaming* Herodotus *and* Dioscorides *for this Assertion. What is now said concerning* Astringent *Medicines was supposed*

ſuppoſed to be underſtood of Opium, *and the Medicines made with it.*

Phyſicians have, in a rational Method, drawn Indications *from what they knew of the* Cauſes *of Diſeaſes, and from their ſmaller Knowledge of their Nature; a far better Method than from the minuteſt Circumſtances of Diſeaſes the beſt Hiſtory of Diſeaſes could furniſh us: But after all this Endeavour, wherein* Fernelius *had a conſiderable part, this great Phyſician is forced to declare* alia noſcendorum, alia curandorum morborum methodus, nec ſingulis omnia aptari poſſunt; *and thus with* Celſus *deſpairs of ever bringing Phyſick into Rules.* Vix ulla perpetua præcepta Ars medicinalis recipit; *the Concluſion of the great* Cornelius Celſus; *which is found to be very true down to theſe times.*

The Caſe will be found altogether different in the following Account of

a Looſneſs. Indications *are, Now, drawn from the* Nature *of* Fluxes; *not from their* precarious *and ſuppoſed* Cauſes; *nor from their* adventitious *and* caſual *Symptoms. There runs an uninterupted Chain from the* Diagnoſtick *Signs of a* Looſneſs *through its* Nature *and* Cauſes, *till it ends in a rational and an evident Method of* curing it. *There is not one Method to be, Now, taken for* knowing, *and another for* curing *a Looſneſs: The ſame Method equally ſerves us in both. We may therefore give a Reaſon for admitting* vomiting *and* purging *Medicines as being often uſeful in curing a Looſneſs; and for excluding* diuretick *Medicines from any part in the Cure; notwitſtanding that all theſe Methods are recommended from* Obſervations *of* Hippocrates, *and are equally retained by Phyſicians to the preſent time.*

We are, Now, able to determine in every Caſe of a Looſneſs, *when* Purging,

ing, Vomiting, Binding, *and* Opiate *Medicines become moſt uſeful, and are fitteſt and moſt proper to be employed: Why we are to prefer any one of theſe to another; and in what* Quantities *and* Doſes *we muſt adminiſter them.* Ipecacuanha *is no longer to be conſidered as an unaccountable* Specifick: *And it is no longer a Paradox, that* Binding *Medicines often occaſion a violent* Purging, *in ſome* Kinds *of a* Looſneſs.

Thus we may judge of the beſt Compoſitions in Phyſick Books for curing every particular Looſneſs: Thus are we qualified to adminiſter every Medicine in the moſt proper times of the Diſeaſe; to improve the Defects of the Medicines in common uſe; and to invent Compoſitions better adapted to the Cures of Fluxes; becauſe we have larger and more extended Ideas *of every* Looſneſs. *Thus the Practice of Phyſicians in the Cures of Fluxes admits of perpetual Precepts:*

or thus we have a fixed *and a* conſummate *Method of curing* Fluxes; *as Dr.* Sydenham *expreſſes it, and what he ſo much wanted.*

But as frequent Occaſions have offered of mentioning Hippocrates, *and other learned Men, with Honour, and all due Regard; ſo I cannot otherwiſe than obſerve, that an eminent* Phyſician *has lately been provoked to* calumniate *and* aſperſe *our* Founder *of Medicine with great Intemperance, in oppoſition to the greateſt Phyſicians in all Ages.*

Sir Richard Blackmore, *ſpeaking of the firſt Phyſicians, tells us, that* ſuch is their Obſcurity and Ignorance, and ſo great and various their Defects, and ſo little, if any, beneficial Knowledge will be got, that Time muſt lie heavy on any Man's Hands, that employs it in reading them. *He becomes more particular in his Diſ-*

pleaſure

pleaſure with Hippocrates; *that in* his Book of Fevers, there is no Account given in it of the Nature, nor of the different Kinds of that Diſeaſe, nor any Method of Cure, nor any Medicines proper and beneficial to ſuppreſs it.

But what better Anſwer can be given than in my Author's Words, What is come to the Man? How ſhould ſuch a ridiculous Deſign ramble into his Head? *Was it poſſible for a Phyſician to aſſign Particulars ſo manifeſtly falſe to the Knowledge of every Phyſician? It is no Wonder that many Phyſicians are ignorant of theſe Matters; but it is ſurprizing that any Perſon ſhould be found of ſuch an Aſſurance, as to pronounce thus magiſterially about Things they do not underſtand.*

Whoever then deſires to be convinced of the Falſeneſs of the mentioned Calumnies,

Calumnies, may turn to that Book of Hippocrates *of* [a] Winds, *and* groſs Spirits, *where will be found the* Nature *of a* Fever; *and particularly of an* inflammatory Fever, *one mentioned by Sir* Richard, *and unknown to* Hippocrates, *as this Author ſuppoſes.*

In the Book of the Nature of Man, *we are taught that* Fevers *are chiefly owing to the* Gall: *An* Eſſence *of a* Fever *more natural than the* exalted Sulphur of the Blood, *by this Adverſary to* Hippocrates.

The different Kinds *of* Fevers *may be found in the mentioned Books of* Hippocrates; *and it is worth obſerving, that* Fevers *are after the ſame Manner divided in the laſt, as we do at this Time. Various Sorts of continual Fevers, far exceeding Sir* Richard's *Liſt of* Fevers, *may be found in the* [b] Epidemicks.

[a] Περὶ φυσῶν, [b] Lib. 6.

The

The Method of curing *Fevers is given in ſeveral Parts of* Hippocrates, *more particularly in his Book of* [a] Diſeaſes, *and in his Book of* [b] acute *Diſeaſes.*

Here then we have the Nature *of* Fevers *aſſigned by* Hippocrates; *who has likewiſe divided* Fevers *into different* Kinds; *which Diviſion has ever been received by Phyſicians, not excepting this Objector himſelf. The Method alſo of* curing *Fevers, mentioned by* Hippocrates, *has never fallen into Diſuſe through the ſeveral Ages of Phyſick. How, then, can this Phyſician anſwer for this bold Charge againſt* Hippocrates; *or where ought the* Obſcurity *and* Ignorance *complained of to reſt?*

This Accuſation is not only falſe, but we find, how unfit our Author is to become a Writer in Phyſick, without be-

[a] Lib. 3. [b] Lib. pag. 385. Fæſ.

ing

ing instructed in the Language *and* Books *of Physicians. It is a very different Matter to give Cures to the Sick, and to know the most proper Medicines, and the best Times of administring them; but far more, to know when these Medicines were first given; and the Good and Misfortune that has hapned in the Practice of them. If we proceed with this Distinction into the medicinal Works of* Blackmore, *we shall discover great Defects in Knowledge, while I hope the Success of his Practice is excusable.*

I will bring but one Instance from among a great many. In his Book of the Plague *we are told of an*[2] Hypochondriacal *or* Hysterick *Fever; a very strange Fever, no doubt, to Physicians. He tells us that it is not ranged in the* Classes *of* Fevers, *as far as he knows. But if this Physician does not know the*

[2] Page 15.

Classes

Classes of Fevers; this Fever, with a Cant *Name, may be ranged there, for any Thing he knows; as we shall quickly find it is.*

But this Fever *imposes upon Physicians, and resembles the malignant Kind so much, that it must be a malignant* Fever *but that the Exercise of Reason is not suspended; whereas most* commonly *the* Head *is much, if not chiefly affected in* malignant Fevers.

Now by this Account, the Sick are not always Light-headed in a malignant Fever; and therefore this hysterick *Fever may be sometimes malignant: A great Flaw in the Differences of Fevers, supposed by this Physician. But why must all ill-looked Fevers, squinting on Malignant, be* Hysterick? *If I were to answer for my Author, I might alledge the Authority of Dr.* Sydenham *for this Name of* Hysterick; *who, somewhere, alledges that every*

Diſeaſe, Phyſicians cannot tribe, may be called Vapours. *But indeed the whole of this Suppoſition of* Light-headedneſs *always attending malignant Fevers is falſe to Sir* Richard's *Knowledge; and in the Opinion of every knowing Phyſician.*

But all this while we know nothing of this hyſterick Fever *till two Pages off, and there we find there is* Chillneſs, Shiverings, and rigorous great Inquietude (*another new Expreſſion*) Vomitings, Dejection of Appetite, Anxiety, Sickneſs and immoderate Sweats, Wakefulneſs, a low diſpirited Pulſe (*another quaint Phraſe, ſhewing our Author's boaſted Knowledge of Pulſes*) and great Diminution of Strength.

Now had our Author been acquainted with Hippocrates, *or the Hiſtory of* Phyſick, *he muſt have known by what Name this* Fever *paſſes among them;*

even

even that it is a low, *or a* [a] slow Fever; *but relating the Words of a Commentator on the Place, we may think that our Author had copied him, in this his* Deſcription. Hujuſmodi Febricula dignoſcenda potius ex languore, Inappetentiâ, corporiſque gravitate quam ex vehementiâ Symptomatum; ita ut dicere poſſimus hujuſmodi Ægrotos non ſentire morbum niſi privativè, dum ſolitas Actiones non poſſunt facile obire.

My Author has not only fallen into theſe Miſtakes, for not being acquainted with the State of Phyſick; but has likewiſe given us a very poor Account of a Diſeaſe, that has ſwelled the Bills of Mortality, for ſome Years paſt; without adding to the proper Article of Fevers. *The generality of Phyſicians have been as much miſled by theſe un-*

[a] Lib. 7. Epidem.

diſcovered

discovered Symptoms, as the Physician who gives us this most defective Account, under the Name of an hysterick Fever.

Hence we may learn from whence flow the undecent Disputes of Physicians about the Names of Diseases: As also, we may learn why we often hear of new Diseases; but most commonly of new Fevers.

How much then must we approve the Design of Dr. Freind, *in giving us a Comment on the undisputed Books of the* Epidemicks? *whereby this second* Celsus *gently corrects the present Defection of his Contemporary Physicians, by setting up* Hippocrates *for a Pattern, that every ingenuous Physician is proud to copy.*

THE

THE CONTENTS.

CHAP. I.

THE *general Account of a* Looſneſs, Page 1

CHAP. II.

The Seat *of a* Looſneſs, p. 9

CHAP. III.

The Nature of a Diarrhœa, p. 21

CHAP. IV.

Antecedent Cauſes of a Diarrhœa. p. 57

CHAP. V.

The Prognoſticks of a Diarrhœa, p. 77

CHAP. VI.

The Cures of a Diarrhœa, p. 93

SECT. I.

How far Purging and Vomiting contribute to the Cure of every Diarrhœa, p. 103

SECT. II.

The Uſe of Diuretick Medicines in the Cure of a Diarrhœa, p. 117

SECT. III.

How far Aſtringent Medicines cure a Diarrhœa; *with ſome of the beſt Forms of Aſtringents,* p. 121

SECT. IV.

Of Opiates, Bleeding, Bathing and Exerciſe for curing a Diarrhœa, p. 132

CHAP. VII.

The Practice of Phyſicians for the Serous and Symptomatick Diarrhœa; *with the Species of a* Diarrhœa *that are moſt eaſily or moſt difficultly cured; or the Prognoſticks*

ticks of a Diarrhœa *deduced from Practice,* p. 145

CHAP. VIII.

Of a Lientery, *and of a* Cœliack Affection, p. 168

CHAP. IX.

The Cauſes of a Lientery *and of a* Cœliack Affection, p. 197

CHAP. X.

The Prognoſticks of the Lientery *and* Cœliack Affection, p. 212

CHAP. XI.

The Cures of a Lientery *and* Cœliack Affection, p. 220

CHAP. XII.

Of a Dyſentery, *or* Bloody Flux, p. 240

CHAP. XIII.

The Cauſes commonly aſſigned of a Dyſentery, p. 271

CHAP. XIV.

The Cures of a Dyſentery, p. 285

CHAP.

CHAP. XV.

The Prognosticks of a Dysentery *from the Nature and Practice of the Disease,* p. 305
The Conclusion, p. 318
Appendix. p. 321
Problema Medicinæ Cultoribus solvendum, p. 325
The Solution of the Problem, p. 328
The Practice of it, p. 335

ERRATA.

THE Reader is desired to correct the running Title from page 168 to 224 according to the Arguments of the Chapters.

THE

LIBRARY

THE SYMPTOMS, NATURE, &c.

CHAP. I.

The general Account of a LOOSNESS.

AMONG the various Changes that happen to the Bodies and Conſtitutions of Men, there is not any more obvious, none of greater Conſequence than a Change in the common Evacuations; for if they are either in Quantity greater than or-

 dinary,

dinary, or if their Quantity is become ſmaller, every Man believes himſelf under ſome Diſorder; eſpecially when he goes too frequently, or very ſeldom, to Stool; becauſe this Failure in Nature is of all Defects of this kind the moſt ſenſible.

But as a *Looſneſs* is that Change that requires our greateſt Care, and the moſt ſpeedy Relief, I have made it the Subject of our preſent Inquiry. For a *Looſneſs* not only proves fatal, when it is the primary and original Diſeaſe; but it is very commonly joined with every Diſeaſe, and that in its moſt dangerous State, and under its worſt Circumſtances. Moreover, a *Looſneſs* is often it ſelf a Cure to the Diſeaſe it accompanies; while at ſome other Times of the ſame Diſeaſe it proves a moſt fatal Symptom. Tho' common Senſe then tells us we have a *Looſneſs*, yet common Experience teaches us, that it is neither *eaſy* to cure a *Looſneſs*, nor always *ſafe* to put a *Stop* to a *Looſneſs*: if we conſider eſpecially, that a *Looſneſs* has often had fatal Conſequences by being overcome by ſome Methods; which, on other Occaſions, have recommended themſelves to Phyſicians equally by their Safety and Succeſs.

My Deſign, then, at preſent is to diſcover the *Nature* of a *Looſneſs* ſo perfectly, as to be able by that Diſcovery to make the moſt proper

proper Adminiſtrations for every Kind of a *Looſneſs*. Thus we may put every Medicine, that is to be found in the Hiſtory of Phyſick, to its beſt uſe. Thus do we ſecure the healing Effects of the moſt powerful Medicines, without hazarding any of the Danger that has often happened in adminiſtring every one of them.

This Inquiry is become neceſſary, the Diſeaſe being very common, and the Methods of curing it precarious, dangerous, and encumber'd with the greateſt Obſcurity and Confuſion. For when Phyſicians tell us that the various *Species* of a *Looſneſs* are as many as the *Matter* that has been obſerved to be voided in any *Looſneſs*; as different as are the different Parts of the Body that can diſcharge their Humours into the Guts, and thus produce a *Looſneſs*; beſides the many Cauſes of a different Nature from any thing yet mentioned, which yet are able to produce a *Looſneſs* of ſome kind or another: In ſhort, the various *Species* of a Looſneſs are, in this their Account, infinite; and the Method of curing them has not been ſettled and determined.

To prevent this Confuſion in our future Inquiries, I will firſt collect the general Marks of a *Looſneſs*, and afterwards aſſign the diſtinguiſhing Symptoms of every particular *Looſneſs*; from which Symptoms I will en-

deavour to discover the Nature of every *Looſneſs*, and the proper Cure of every particular *Looſneſs*. Thus I ſhall avoid the Confuſion that ariſes commonly from a great Number of Obſervations, that are very unfaithfully made, and unskilfully apply'd. Thus we may ſee the true and proper uſe that is to be made of Obſervations, and Experience, in diſcovering the Nature of Diſeaſes, and for ſettling and fixing the Methods of curing them.

The moſt obvious *Species* of a Looſneſs is a *Diarrhœa*; which, for that Reaſon, has by Eminency the Name of a *Looſneſs* in general. The diſtinguiſhing Marks of a *Lientery*, *Cœliack Affection*, and of a *Dyſentery*, are likewiſe very manifeſt and evident.

A *Diarrhœa* has been ſuppoſed, but very falſly, the moſt ſimple and leaſt complicated kind of a *Looſneſs*; which is deſcribed by *Aretæus* to be the [a] *voiding of liquid Food unconcocted:* but that Phyſician does not ſufficiently diſtinguiſh between a *Diarrhœa* and the *Lientery*. *Galen* ſays, that a [b] *Diarrhœa is a plentiful and frequent Flux of the Belly, without an Inflammation or Ulcer of the Guts.* There not being an Ulcer or an Inflammation of the Guts is put by *Galen* as the Dif-

[a] Lib. 2. cap. 7. [b] Finit. Medic.

ference

ference between a *Diarrhœa* and the *Dyſentery*, which has been ſuppoſed always to have an Ulcer as an eſſential Part of the Diſeaſe.

Phyſicians commonly repreſent a *Diarrhœa* to be a *Running or Flux out of the Guts, without an Ulcer, but that Gall and Phlegm are voided in great Abundance, and theſe either alone or mixed together.*

But when *the Food paſſes quickly through, without having any ſenſible Change made upon it, and much in the ſame Condition as when it was ſwallowed down:* this is a *Looſneſs* in the Opinion of the greateſt Number of Phyſicians, and is by the *Greeks* called Λειεντερία, by the *Latin* Phyſicians, *Inteſtinorum lævitas*, and may in *Engliſh* be called the *Smoothneſs* or *Slipperineſs* of the Guts. [a] *Hippocrates* informs us that the *Smoothneſs of the Guts diſmiſſes our Food altogether unconcocted, without Pain, and without the Sick loſing their Fleſh.*

[b] *Actuarius* giving us the like Deſcription of the *Slipperineſs* of the Guts, (which tho' he thought followed a *Diarrhœa* or a *Dyſentery*) ſays that ſome ſuch like thing happens to People ill of the mentioned Diſeaſe, as to thoſe who are troubled with vomiting; *who, becauſe they cannot keep what*

[a] Lib de Affect. pag. 536. Foeſ. [b] Lib. 1. περὶ διαγν. παθ. cap. 42.

they have eaten, throw it quickly up again. The Food is brought up unchanged in this laſt Caſe, as it is thrown off in a *Lientery.*

Yet if the Food has remained long enough in the Stomach to be concocted, but the *Chyle*, or *Cream* of the *Food*, is *afterwards carry'd off liquid, and not perfectly digeſted*, this Looſneſs is called the *Cœliack Affection*, or the Diſeaſe of the Stomach; though we ſhall hereafter be convinced, that the Stomach has ſufficiently done its Part, in concocting the Food. But we muſt obſerve, that as the Chyle is the Subſtance of this *Looſneſs*, ſo it is always without any *Griping*, but commonly is attended with *Fainting.*

The *Looſneſs* which is of all the moſt terrible is the *Dyſentery*; wherein the Blood, the Fountain and River of Life, is often voided in a very great Abundance, always in a Quantity greater or leſs. And indeed it is very terrible to perceive the Subſtance of our Recruit not only carry'd off, and the Blood deprived of its Supply; but even the Blood it ſelf alſo waſted in a *Dyſentery.* This is not all; but in a *Dyſentery, beſides the Loſs of Blood, and the Quantity of Slime, and many Humours, there is Pain and violent Griping.*

[a] *Hippo-*

[a] *Hippocrates* ſays, *That when the Body is heated, and ſharp Humours are voided, and the Gut is fretted and exulcerated, and Men have Bloody-ſtools, this is a Dyſentery; a Diſeaſe very great and dangerous.* And in [b] another Place he tells us, that *when a Perſon is ill of a Dyſentery, there is Pain and Griping all over the Belly; and he voids Gall and Phlegm, and aduſt Blood.*

So the moſt elegant *Cornelius Celſus*, the moſt exact Follower of *Hippocrates*, calls that Diſeaſe *Tormina*, which his Maſter named Δυσεντερία; and after him ſays [c] that, *within, the Guts are exulcerated; out of them Blood flows, and that always with ſome liquid Excrement; ſometimes it is voided with a ſlimy and mucous Subſtance; and ſometimes there is, along with the Blood, a fleſhy Subſtance.*

Theſe, and the like Deſcriptions of a *Dyſentery* have been unanimouſly handed down through the ſucceeding Ages of Phyſick. [d] *Galen*, in the like manner, ſays, *a Dyſentery, or the Grief* (Difficultas) *of the Guts is an Ulcer of the Guts with an Inflammation, with a Diſcharge of Blood, and of Streaks like Lees of Wine, not without great Pain and Griping in the Belly.*

[a] De Victûs rat. lib. 3. ſect. iv. [b] De Affect. [c] Lib. 4. cap. xv. [d] Finit. Medic.

Galen in several other Parts of his Works describes a *Dysentery* much after the same manner; some whereof will be considered, when I enquire particularly into the Nature and Cure of a *Dysentery*. Then it will appear by what Means the Blood breaks through its Vessels, and flowing into the Guts is mixed with the Stools, and voided with them; in which the Essence of a *Dysentery* consists; for Blood voided in liquid Stools is its pathognomonick Symptom, without the supposing any Cause for the Discharge of the Blood.

But in order to attain the Knowledge of these useful Particulars, I will follow the Rule and Advice of the great *Celsus*, and endeavour to discover the *Seat* of a *Looseness* by calling in the Help of *Anatomy*; since that great Physician with great Truth assures us, that [a] *we may very easily know the Diseases of the inward Parts, and the Ways of curing them, if we first briefly shew their* Seat.

[a] Lib. 4. cap. 1.

CHAP.

CHAP. II.

The Seat of a LOOSNESS.

AS we have in the foregoing Chapter, related the Signs whereby every Looſneſs is known, and may be diſtinguiſhed from one another; ſo, in order to diſcover the Nature of every Looſneſs and its proper Practice, it is abſolutely neceſſary to diſcover the Seat of every Looſneſs, the Scene where the forementioned Calamity is tranſacted: For if we conſider that the mentioned *Diagnoſtick* Signs are merely the Effects of a Cauſe that overturns the natural Action of a Part, *viz.* the Guts; it will eaſily follow that it is alſo neceſſary to know the natural State of the Guts, and in what Particulars their preſent State is brought about; or how, in what Particulars, their natural Action is perverted, hurt, and put out of order. When this is diſcovered we become apprized of the Nature and Eſſence of the Diſeaſe, of the true Cauſes that produce it, and of the direct Method of curing every particular Affection, as far as human Art and Skill can poſſibly perform.

We are now particularly to enquire whether the *looſe Stools*, filled with all the various Humours, and with the various Degrees of Liquidity wherewith they appear, may be made

made manifeſt from our Knowledge of the State of the Guts? Whether the Griping, and other various Symptoms become obvious from the natural and preternatural State of the Guts? And laſtly; if the Guts are found inſufficient to furniſh out all theſe Symptoms, whether any *Inlets* into the Guts may contribute to, and aſſiſt the Guts in what they are defective, by rendring the Stools and Excrements more liquid? The true State of the Guts then, both as to their Structure, and the Ways their Liquids are affected, muſt, without doubt, conduct us into the *Nature*, *Cauſes*, and *Cure* of every Looſneſs.

The Advantages ariſing from a true Relation of the natural State of the Guts being ſo great and deſirable, I proceed in the next Place to this Account it ſelf; becauſe we are led thereby to great Knowledge: And tho' the Guts are more immediately concerned, yet the *Stomach* too has a great Share in the Calamity of every Looſneſs, and bears a principal Part in ſome of them. For this Reaſon it will be proper to begin our Account ſo high as the Parts are which belong to the Stomach.

The *Stomach* is generally ſituated in the lower Belly of every Animal, Fowls only that feed on Grain excepted. Its upper Orifice in *Men*, *Quadrupeds*, and in *Fiſhes* that *reſpire*, is immediately under the *Midriff* or *Diaphragma*:

Diaphragma: but this Orifice is almoſt contiguous to the Mouth of the *Fiſhes* that do not *reſpire.* The Stomach then is in the upper Region of the *Abdomen,* partly in the left *Hypochondrium,* and partly under the *Pit* of the Stomach, or *Scrobiculus Cordis:* It is united to the *Midriff* by Means of the *Oeſophagus,* and its lower Orifice or *Pylorus* is continued with the *Duodenum,* the firſt of the ſmall Guts.

The Stomach conſiſts of four Coats, tho' it was long ſuppoſed to conſiſt only of three. The firſt Coat covers the Stomach every where, and is a Continuation of the *Peritonæum,* after it has given a Coat to the *Midriff.* The Fibres of this Coat run directly from the firſt Orifice to the laſt and ſecond; yet theſe Fibres are ſtrongeſt in the Bottom of the Stomach.

The ſecond Coat of the Stomach is made up of thicker and more fleſhy Fibres, and are of a double Order; one internal, and another external; this Row of Fibres ſurrounds the Stomach circularly, and cuts the Fibres of the forementioned Coat at right Angles, while the inner Order of Fibres creeps along the Stomach obliquely. The proper uſe of this fleſhy Coat is, without doubt, to contract the Stomach, and thereby to drive the liquid Contents of it out by the *Pylorus.*

When

When the ſecond Coat is removed there appears immediately a third, which was commonly ſuppoſed to be the laſt Coat of the Stomach, and is called the *Nervous* Coat: in it there is a great Number of *Blood-Veſſels* and *Glands*. Dr. *Willis* firſt told us, that this Coat was every where covered with a *villous* Subſtance, whoſe Pile or Shags are inſerted (like the Pile of Velvet) perpendicularly on the third, or nervous, Coat. But Dr. *Willis* afterwards diſcovering that this villous Subſtance might be parted from the nervous Coat, and that only by ſteeping the Stomach in warm Water, very properly conſtituted this villous Subſtance for a fourth Coat of the Stomach, by the Appellation of the *villous Coat*; by which Name this fourth Coat is known at this Time. So that the Stomach truly conſiſts, and is compoſed, of the four mentioned Coats, whoſe proper Office is eaſily diſcovered, and ſhall be as plainly related as this Place will admit.

As the Method of Dr. *Willis* for ſeparating his *velvet* or *villous* Coat of the Stomach was new, ſo was it not efficacious enough to diſcover whether this was truly a Coat or not, and far leſs the true uſe of it; for that learned Phyſician thinks the principal uſe of it is to defend the *nervous Coat* from the ſharp or rough Aliment that may be ſent into the Stomach; and, ſpeaking afterwards

of

of the *villous Cruſt* in the Guts, he believes it defends the nervous Coat of them from the Shock he imagines this Coat might otherwiſe receive from the Chyle falling into the Inteſtins. Beſides, he fancies that the *villous* Coat receives the Chyle in order to deliver it (but to what purpoſe) to the *nervous* Coat. But as I ſhall hereafter mention a Method of ſeparating the villous Coat more eaſily, when I have occaſion to mention it in the general Account I am to give of the Inteſtins, I will only add that the villous Coat is altogether made up of *Arteries*, which terminate in it, and from which are made great Diſcharges into the *Stomach* and *Inteſtins*.

The *Stomach* ends by the *Pylorus* in the Guts, and the Guts are a continued Canal from the Stomach till they end with the *Rectum* at the *Anus*. The Guts in general are divided into *ſmall* and *great* Guts: The firſt are the *Duodenum*, *Jejunum*, and *Ileum*; the laſt are the *Cæcum*, *Colon* and *Rectum*. The Structure of the Guts is like that of the Stomach, and their Coats proportionable to their reſpective Bulk; only their common Coat comes directly from the *Peritonæum*, and the villous Coat is continued from the Stomach. This Coat after due Maceration in Vinegar and Water is firſt parted from the nervous Quantity, and the further Separation is eaſily performed by blowing only between

theſe two Coats. The villous Coat is very thick, and yet it is very light; and when it is filled with Air and ſuffered to dry for a Minute, four Inches of it do not weigh as many Grains. Its Subſtance, when viewed in a Microſcope, is like the Pith of a *Ruſh*.

But as my principal Deſign, in the Account I give of the Guts, is to diſcover theſe Sources that ſupply the liquid Excrements, and that render them ſometimes incredibly thin and watery; ſo I will conſider theſe Liquors as they are either ſeparated from the Blood at ſome Diſtance from the Guts, or as they are more immediately ſecreted in the very Glands of the Guts; both which Liquors are of the greateſt uſe to be known for the *Animal Oeconomy*, and give the greateſt Light to our preſent Inquiry. Our concocted Aliment, then, no ſooner gets out of the Stomach, but that it quickly meets two Liquors ſecreted at ſome Diſtance from the Guts, and brought into them by their proper Pipes and Canals: Theſe Liquors are the *Gall* and Liquor of the *Pancreas* or *Sweetbread* that are poured into the *Duodenum*, the firſt of the Guts lately mentioned. The thicker Part of the *pancreatick Duct* opens, as was ſaid, into the *Duodenum* four or five Inches below the *Pylorus*, at which opening the *Gall* in Men likewiſe flows into the Gut; yet the pancreatick Duct in moſt other Animals

is

is a proper and particular Conveyance of the pancreatick Juice only, and is further in the *Duodenum* than the Inſertion of the Duct of the *Gall.*

Other Liquors, diſcharged into the Guts in great Abundance, are ſecreted at the Glands of the Guts immediately. The ſmall Guts of more perfect Animals are full of ſeveral Glands ſcattered up and down them at unequal Diſtances from one another. In the Beginning of the Gut the *Plexus* of Glands are ſmall, but become greater and more numerous as we proceed in the Guts, and are biggeſt at its ending. It often happens that for a large Tract of Inteſtin thick Cluſters of theſe *Plexus* of Glands are planted, but eſpecially about the End of the *Ileum*; and there they are found in ſo great a Number, that they ſeem to be the principal Compoſition of that Gut; inſomuch, that the *Ileum* is always provided with *Plexus* of Glands, however deficient ſome other Guts are found to be. Nay, the *Ileum* always makes good the ſcanty Proviſion of Glands in other Guts; for it is then beſt ſtored when the *Duodenum* and *Jejunum* are worſt provided. Theſe *Plexus* are very various; becauſe in the like Space a *Plexus* ſometimes conſiſts of ten Glands; ſometimes of twenty; ſometimes of forty; and at other times it will conſiſt of fourſcore Glands.

The *Situation* of the Glands is very inſtructing, their Baſe being in the middle part of the Gut, and is often ſeen in the inveſting Coat, without any Diſſection, while their Tops ſhew themſelves in the villous Coat of the Gut. It is likewiſe worthy of Obſervation, that there is not one of theſe Glands to be met with on that Side of the Gut which is joined to the *Meſentery*, but always on the contrary and oppoſite Side, be their Number in the ſmall Guts ever ſo great.

Beſides the mentioned *Plexus* of Glands, there are a great Number of another Sort found in the Guts; and as they are ſingle and not in a *Plexus*, are called *Solitary* Glands. They have ſeveral Orifices, and are blown up with the gentleſt Breath: They ſeparate a thin Liquor into the Guts, while the *Plexus* of Glands yield the mucous Subſtance that covers the Guts and defends them from Injuries they are ſubject to from hard and rough Excrements.

The Glands to be met with in the great Guts are pretty many, and by the Liquor they ſecrete ſeem to be of a different Nature from any of the former: The Glands in the *Colon* and *Rectum* are conſiderably larger than thoſe in the ſmall Guts; they are not in a *Plexus* but are ſingle Glands only. Their excretory Ducts diſcharge a mucous Subſtance, which is reſerved in a kind of *Lacuna*. This

Mucus

Mucus is often miſtaken for *Fat*, and gave Riſe to the Opinion Phyſicians entertain at this Time, of *Fat* being diſcharged in the Stools in a Looſneſs, as we ſhall find hereafter. The learned *Mercurialis* is drawn into this Miſtake by the great Anatomiſt *Veſalius*; but we are taught by this Miſtake, what it was, that Phyſicians, in all Ages, belived to be the *Fat* among the Stools, when they ſpoke of a *colliquative* Diarrhœa: *Naturaitaque*, ſays *Mercurialis*, *ne offenderentur Inteſtina ab aſperitate Excrementorum, oblinivit Inteſtina quodum Muco, qui tuetur ipſa ne offendantur: imo vero ut etian* Veſalius *in ſuis libris Anatomicis dixit*, In multorum invenitur Inteſtinis Adeps copioſiſſimus, *ut non malè faciant* Arabes, *qui hunc Mucum modo Adipem & Pinguedinem, modo Mucilaginem appellant: imò* Galen. 4. *Aphor.* 26. *nominavit Adipoſa corpora.*

Now that immenſe Secretion of various Liquors made, through the prodigious Length of the Guts, is performed at theſe Glands from the arterial Blood that flows conſtantly along them: it is on this Account we find the Guts better provided with Arteries than any other like Part in the whole Body. The *villous* Coat is altogether made up of *Arteries*, as I lately obſerved. The Guts receive numerous Branches from the upper and lower *Meſeraicks*: the former branching off from the

Aorta a little above the *Emulgents* is ſpread every where along the *ſmall* Guts, while the lower coming off the Ending of the *Aorta* provide plentifully the great *Guts* with great Numbers of Branches. Moreover, the *Duodenum*, beſides this Proviſion by the *Meſeraicks*, has a particular *Artery* beſtowed upon it ſelf from the *Cœliack*. The *Rectum* too has external hœmorrhoidal Veſſels from the *hypogaſtrick* Artery; but, as theſe Veſſels have no Share in our preſent Inquiry, we ſhall drop any further Conſideration of them.

We muſt conclude then, that this great *Apparatus* of Machines, of *Glands*, and *Blood-Veſſels*, and the various Secretions performed in the Guts, was deſigned for ſome very neceſſary and particular Purpoſe of Life; and that Errors and Defects in the Performance of the Office of any one, or of all theſe, muſt bring along with them great Diſeaſes and Death it ſelf under different Shapes and Appearances. But to be as particular as my preſent Subject does allow me to be; it is very manifeſt from the Proſpect of the *Stomach* and *Inteſtins* thus laid open to View, that the Office of the *Stomach* is to prepare the Food and Aliment that muſt repair the Blood after the Decay and Loſſes it ſuſtains in every Part of the Body: as alſo, that it is a Machine able and ſufficient to overcome the Reſiſtance of the Guts, when it drives

the

the prepared Aliment into their Cavity. For the *Food* being well macerated in the Mouth, while it is grinding with the Teeth, into ſo ſmall Pieces that it may with Safety be conveyed and thruſt down the Gullet into the Stomach, remains there by the Figure of the Stomach only and the difficult Progreſſion it meets in its Aſcent into the *Pylorus*, as long as it retains a ſolid Form; but afterwards, in a natural State paſſes into the *Duodenum*, as faſt as it can become a more liquid Maſs.

The concocted Food no ſooner paſſes into the *Duodenum*, but it is rendered more liquid by the Addition of the *Gall* and *Pancreatick Juice*; the firſt whereof contributes to the Fluidity of the Chyle, not only as it is a Liquor, but as it abounds likewiſe with proper Salts, whereby the Liquidity of the *Chyle* is far more encreaſed, than by the Addition of the *Gall* it ſelf. And if we follow the *Chyle*, eſpecially in the *Small* Guts, we find it is continually receiving an additional Supply of Liquor to render it more fluid, and for that Reaſon, more apt to be driven into Orifices of the *Milky-Veſſels*, the firſt Stage it makes towards the Blood.

On the other Hand, that Part of the *Chyle* that is groſs and cannot be admitted into the *Lacteals*, is driven along the Cavity of the Guts, till it is entirely thrown out of the Body by the *Anus*: but through the whole

Progreſs of uſeleſs and excrementitious *Chyle*, it has been the principal Care of Nature to provide againſt the *Sharpneſs* and *Roughneſs* of thoſe Excrements.

But if we conſider the Errors and Accidents to which this Method of Nature is ſubject, we ſhall not only be able to deduce the Matter and Manner of every *Looſneſs* from them: but the Nature of *Coſtiveneſs* (the Reverſe of a *Looſneſs*) as well as the *Nature* of Colicks, in general; and the Nature of a *Teneſmus* may be made evident. Nay the *Boulimia*, a Diſeaſe little underſtood at preſent, may be explained. Thus wiſely did Phyſicians anciently recommend *Anatomy*, as one neceſſary Piece of Knowledge for attaining the Nature of a Diſeaſe; from which the true Method of curing it can only be learned. At preſent, I will attempt to make good this Advice, by ſhewing the great Light we bring into the Knowledge and Cure of a *Looſneſs*, by Means of *Anatomy*, and a right Uſe of what has been related and deſcribed.

CHAP.

CHAP. III.

The Nature of a DIARRHŒA.

IN discovering the *Nature* of a *Diarrhœa*, from which the Method of curing it can only be drawn, we must first relate its Symptoms; because we may be led by the Symptoms of any Disease into the Nature of that Disease. The Symptoms then of a *Diarrhœa* are *frequent Griping and loose Stools, full of Slime, Gall, and blackish Humours.* Sometimes *the Stools are watry without Excrements:* at other times, *there is a great Abundance of Excrements, and they greasy and frothy.* In time of a *Diarrhœa* there is commonly a *great Loss of Appetite, a Fever, a weak,* and often, *a depress'd Pulse.* The Sick make but little *Water*; which is commonly of a *natural Colour*, though it is sometimes *lixivial.* The Stools, too, are often like *Lees* of *Wine.*

The Distemper may last till the seventh Day with Benefit to the sick Person, when it is *without* a *Fever.* But *Avicenna* justly observes, *that there is always Danger in every Sickness that begins with a Looseness.* When a Diarrhœa holds longer on a Person, there is a great *Decay* in the *fleshy Parts, Faint-*

neſs, and a ſmall Pulſe. A Lienteria and a Paſſio Cœliaca often follow a Diarrhœa. *Hippocrates* obſerves, that after a Diarrhœa, comes a *Dyſentery*; and *that it is an ill Sign when a Dyſentery follows a Diarrhœa.* A *Dropſy* often enſues a Diarrhœa of a long ſtanding; and *Hippocrates* relates, how *Serapis ſwelled* (or became dropſical) *after a moiſt and liquid Belly*; or after a Looſneſs. After a long continuance of this diſmal Scene *Death* often finiſhes the Diſtemper.

Now if we conſider what has been laid before us, in the foregoing Chapter, the firſt Symptom of going to Stool more *frequently* cannot occaſion any Difficulty: for, in it, the common Courſe of Nature is manifeſt; that the groſſer Part of our Aliment is conveyed out of our Body by the *Rectum*: as alſo that the *muſcular* Coat of the *Stomach*, aſſiſted with a like Coat through the whole Tract of the Inteſtins, are the impulſive Force that drives every thing out of the *Stomach* and *Inteſtins*; faſter or ſlower, according to the Reſiſtance the Contents of the Stomach and Inteſtins make to their Expulſion. And therefore, the Contents of the Stomach and Inteſtins are driven out more or leſs thorowly, faſter and oftner, according as theſe muſcular Machines are ſet a going. Moreover, from the ſame View of the Guts, as well as by what paſſes in time of the *Jaundice* and

ſome

ſome other Diſeaſes, it is manifeſt that the *Gall* is neceſſary for the natural *Expulſion* of every thing contain'd in the Guts: by Conſequence, proper Changes in the *Gall*, in Quantity and ſome other Circumſtances, cannot fail to produce a more *frequent* and unnatural Expulſion; as we find in the Caſe of a *Diarrhœa*; which Circumſtances muſt be duly conſidered in the Practice of that Diſeaſe.

But tho' theſe muſcular Machines were not ſuppoſed to act much more than in a natural State, the Stools muſt be more *frequent* by their being thinner: which Thinneſs may be acquired by an extraordinary Quantity of *Gall* and other Humours. And therefore the *Gall*, but eſpecially when it is aſſiſted with other Humours, will make the Stools to be more *frequent*.

In the next Place; thoſe muſcular Machines ſeldom act beyond their natural Strength, but by ſome ſtimulating Cauſe; which extraordinary *Stimulus* is a general Cauſe of Pain. Hence it is that a more frequent going to Stool is often attended with Pain; and Pain in the Bowels is what we expreſs by *Griping*: and therefore as *Griping* is a very common Symptom of a *Diarrhœa*; ſo the Diarrhœa muſt be greater, becauſe it is chiefly produced by the extraordinary Action

of the muſcular Coats of the Stomach and Inteſtins.

It is not only of the Nature of a *Diarrhœa* that a ſick Perſon goes more frequently and with *Griping*; but his Stools are likewiſe *liquid*, and of a looſe Conſiſtence: which is a pathognomonick Symptom, and is indeed the general Symptom including every kind of Looſneſs, and ought on that Account to be very particularly explained. However, we cannot have a more ſenſible and obvious Notion of any thing, than we may have of the Looſneſs of our Stools; and that by recollecting the true State of theſe Matters in the foregoing Chapter: For we have it there livelily repreſented what the Condition of our Aliment is after it has undergone the Labour of the Stomach. Here it is reduced to a Subſtance as liquid as we commonly find the Stools in time of a Looſneſs, in a *Diarrhœa*, or in any other kind of Looſneſs. And therefore if this concocted Aliment was ſent out of the Stomach, and was expelled out of the Inteſtins under that Form, we ſhould have looſe Stools.

On the other Hand; as that is never the Caſe, becauſe part of the Chyle is always driven into the *lacteal Veſſels* in the greateſt, and moſt violent *Diarrhœa*; ſo theſe looſe Stools are produced by ſome other Means: which

Means

Means are likewiſe obvious, by conſidering the Liquors that pour in great abundance into the *Guts*, or are ſecreted plentifully at their *Glands*. Not only the *Gall*, and the great Quantity of the *pancreatick* Liquor poured into the *Duodenum* are ſufficient to furniſh the Looſneſs of our Stools; but the plentiful Supply of Liquor from the *Glands* of the Guts, eſpecially of theſe in the *Ileum*, does more than anſwer the looſe Stools we daily obſerve: and therefore the Looſneſs of Stools (the Symptom that bears very juſtly the Name of all the Kinds) is very manifeſt.

In Conſequence of what we have mentioned, we need not wonder, that *Gall* is often found, in great abundance among the Stools while Men are ill of a Diarrhœa. It is a Liquor neceſſary in the Oeconomy of the Body in times of Health, and conduces to the Support of it: and we now ſee that it gives us a *Looſneſs*, when it exceeds, either in its Quantity, or its Sharpneſs. It is no Wonder then that the *Gall*, a Liquor of a deep Dye, that is poured into the *Duodenum* continually by the *Ductus communis*, ſhould be found among our Stools: more eſpecially when its Quantity is become greater than natural.

Another Symptom, *the Stools being full of Slime*, common enough in a Diarrhœa, may be very eaſily conceived, if we recollect the

the Account in the foregoing Chapter: for there we are taught a particular Secretion, in the great Guts, of a mucous and ſlimy Subſtance, which always beſmears their inner Surface, and ſeems to be deſigned for covering and defending them; beſides ſome other great Purpoſes and Ends of Nature. Now as this *Mucus* or *Slime* is eaſily diſcharged from its *Cells* and *Lacunæ*, in any violent Contraction of the Inteſtins, or when their Contents are driven along them with greater Impetuoſity; therefore, in time of a Diarrhœa, the Stools are very commonly filled with *Slime*.

Tho' this is the moſt conſtant Cauſe of Slime appearing among the Stools when Men are ill of a Looſneſs; yet many other things yield this Jelly and mucilaginous Subſtance, *viz.* ill digeſted Food, eſpecially if that is of Offals, Bread, *&c.* all which ſometimes occaſion our Stools to be found mixed with *Slime*.

Among other Symptoms of a Diarrhœa, the *Stools* are found very *watry*, and ſometimes *nothing but Water paſſes by Stool*. The Reaſon is evident; for if either the Glands in the ſmall Guts are much ſtimulated, the Secretion of the Liquor at theſe Glands will be greater; or if a greater Quantity of the ſerous Parts of the Blood is ſeparated in the mentioned Glands, by the general Laws of Secretion;

Secretion; then, and in that Caſe, the Quantity of Water ſeparated at the Glands of the Inteſtins, may be near the Quantity of the Water diſcharged by inſenſible *Tranſpiration*, and the Quantity diſcharged by *Urine* together: Which Quantities, together with the natural Secretion at the Glands of the Inteſtins, fully anſwer the Quantity of watry Stools in a *ſymptomatick*, or even in a *colliquative Diarrhœa*.

This is plainly the Caſe, if we conſider either what is ſaid about the Doſes of *purging* Medicines in the *Solution* of my Problem, or what paſſes in this kind of *Looſneſs*; for the Quantity of *Urine* is not only defective; but there is likewiſe no manner of *Griping* in the Courſe of this *Looſneſs*; which ſhould otherwiſe be, as has been already ſhewn. This Store is ſo great, that we do not want the Addition of the *pancreatick* Liquor, even tho' we ſhould conceive it proportionably augmented. The learned, [a] *Marcel. Malpighius* thus expreſſes himſelf on this Occaſion, *Evacuationem etiam in Inteſtinorum oblongo Tractu fieri juvantibus minimis glandubus, cæteriſque vaſorum generibus in Meipſo experior; nam flante Auſtro excitatur in me toties Laſſitudo, Carnium Turgentia, & Liquidis copioſe ſolvitur Alvus.*

[a] Epiſt. ad Jac. Ruff. Tactûs Organo.

But

But the first, I think, that has observed this watry Looſneſs is *Carolus Piſo*, when he treats of the Diſeaſes of the lower Belly, that proceed from an overflowing of Serum; but more particularly when he treats of a [a] *ſerous Diarrhœa.* This Author obſerves, that in the middle of the Autumn, about which time the wither'd Leaves begin to fall from the Trees, if Men are not careful to have warm Cloaths, and to guard againſt the Injuries of the ambient Air; they will find themſelves attacked and followed for ſome Days with liquid and watry Stools; which are likewiſe, often, bilous and like Clay.

[b] *This Year*, ſays Piſo, *as alſo laſt Year, about the end of Auguſt*, when the Weather was very changeable as to Heat and Cold in the ſame Day, I found that very many of the Students (eſpecially thoſe that plyed their Books harder than their Cups) who were not careful to cover themſelves in the fore Part of the Night, were very ſubject to the watry Diarrhœa, which commonly held them four, or ſeven Days. The 65th Obſervation is of a Diarrhœa of the watry Kind, that held himſelf a Fortnight.

Theſe Obſervations truly confirm what *Piſo* has aſſerted, *viz.* that a cold Seaſon,

[a] Sect. iv. cap. 1. Ponte ad Monticulum 1618. Lotharingiæ.
[b] Obſerv. lxiv.

eſpecially

eſpecially if it comes ſuddenly, is the *Cauſe* of a *watry Diarrhœa*; which Cauſe plainly produces this Effect in the Way I have lately ſhewn. Whereas the Account here given, by *Piſo*, about the Power of cold Air to produce a watry Diarrhœa is equally precarious and falſe.

Hence it is, that his Prognoſtick of this kind of *Diarrhœa* is againſt Experience; and his Method of curing a *watry Diarrhœa* can never have any good Effect. The keeping in a warm Place is well adviſed, and may be drawn from his Principle, though that be falſe; his Indication for *drying* the Blood, and carrying it off by the *Kidneys* is altogether impracticable; and the Means for doing it are altogether inſufficient for that End. But this will be more properly conſidered hereafter.

Piſo was well apprized, and informs us of a *watry Diarrhœa* that attends ſundry Diſeaſes: which is eaſily underſtood by the Account I have given of it; but will not follow from his Explanation of that kind of *Diarrhœa*.

Piſo tells us of the *Diarrhœa* following the *Gout*, and, as he, with the Phyſicians in his Age, believed that Diſeaſe flowed from the Head; ſo he calls this *Diarrhœa* with the *Gout*, a *Diarrhœa* from a Flux of Water from the Head upon the Bowels.

The

The ſame Author bids us obſerve that *bilous* and *watry Stools* will take People in the beginning of continual Fevers, not only ſeven or fourteen Days; but even for forty Days. The Reaſons he alledges for this Circumſtance of a *Diarrhœa* are falſe, and the Signs of his Cauſe are improper, as well as inconſtant, in Caſes of a Diarrhœa that attend a Fever.

There is not any thing more certain than that a *Diarrhœa* of different Sorts accompanies a Fever; but the Reaſon of it was never before underſtood. The learned and excellent Phyſician *Anuſius Foeſius* was ſo miſtaken about the Cauſe of a watry *Diarrhœa*, that he charges the great *Hippocrates* with being obſcure when he ſpeaks of this kind of *Looſneſs*. *Hippocrates* had averr'd, that [a] in a hot Fever, when there is outwardly a Chillineſs and a Shivering, with frequent Stools like *Water*, there is Danger portended to our *Eye-Sight:* but eſpecially, if the Sick is ſeized with a deep *Stupor*, which is called a *Catochus*. Yet it is plain, by what is ſaid of the Nature of a *watry Diarrhœa*, that there is nothing incongruous or obſcure in this *Aphoriſm* of *Hippocrates*; which was only obſcure through not knowing the neceſſary Cauſe of a watry *Diarrhœa*.

[a] Coac. Prænot. 134. Prædictor. 81.

The

The learned *Piſo* relates ſundry Facts of a watry, and of a bilous *Diarrhœa* that has followed People for a long time; but the Reaſons he aſſigns for theſe Facts are altogether inſufficient, and the Prognoſticks will not anſwer his Hopes. His Caſe 74th is very well worth our obſerving more particularly. I have obſerved very lately, ſays *Piſo*, that ſuch a watry Diarrhœa returning at times to a Jeſuit, put a Stop for ſome Months to an *Aſcites* that had held him a long time, which ſwelling afterwards fell and entirely vaniſhed by a regular and exact Diet. This Obſervation confirms what *Hippocrates* [b] has formerly taught.

When the *Stools* are filled with a *blackiſh Humour*, is a Symptom, Authors have found difficult to explain, though it often happens in a Diarrhœa. I will not take any notice of a Blackneſs our Stools receive from *Food*, *Drink* or *Medicines*; becauſe this Blackneſs is altogether accidental, and does not ſufficiently account for the Commonneſs of this Symptom; and the Blackneſs, for that Reaſon, muſt generally be produced by ſome natural Humours in the Body, that are ſome way corrupted in the time of a Diarrhœa. And therefore we muſt again look back into the foregoing Chapter, where the State of

[b] Coac. Præn. 457, 482.

the *Stomach* and *Inteſtins* was laid open to our View. We may find there that the *Gall* can give this Colour when it is corrupted; ſo that the corrupted *Gall* is a Cauſe of the Blackneſs in the Stools.

But if we further conſider the villous Coat of the Guts; and that it wholly conſiſts of the Termination of *Arteries* curiouſly wrought together: If, then, theſe Arteries are very much ſtimulated, they will diſchage a Quantity of Blood; which Blood quickly corrupts and becomes *black*. In that Caſe, corrupted Blood intimately mixed with the Excrements by the ſame Power they are expelled, this black Blood is thrown out with the Excrements; or the Excrements are found full of a *blackiſh Humour*, as often happens in a Diarrhœa.

Such a Diſcharge of Blood from the Guts is ſo natural and, at the ſame time, ſo common; that it is frequently diſcharged without any conſiderable Irritation; as we find in *New-born* Children, and is truly their *Meconium*. And therefore theſe *black Humours* are altogether, or chiefly, owing to a Diſcharge of Blood, and its corrupting in the Guts.

Phyſicians obſerve that the Stools are *frothy* and huff up like Yeaſt, when Men are ill of a Diarrhœa; which Symptom is very obvious, and is of great uſe for ſhewing the State

State of the Sick under that Circumſtance of the Diſeaſe. For *Froth* is only liquid and viſcid Parts filled with Air. Aliment then inſufficiently concocted, and unfit to paſs into the lacteal Veſſels, is viſcid; which mixed with the Air in the Inteſtins, as well with the Air formerly contained in the Pores of our Food and Drink; and all theſe toſſed together by the periſtaltick Motion of the Guts, is neceſſarily beat into a frothy Subſtance. Beſides, as *Fruit*, and other ſuch Portions of Food, are Subſtances that are eaſily fermented; we may therefore conclude, that the Stools may not only be *frothy*, but may be vaſtly fermented and huff up to double the Space after they are out of the Body, as we commonly find.

The Difficulty in accounting for this Symptom occaſioned it to paſs for a particular Species of a Looſneſs; tho' we find that this is a very accidental *Symptom* only; and the Suppoſition of theſe Stools being full of Spirit or Air, which was likewiſe ſuppoſed to be bred in the Brain, obtained it the Title of *Cerebralis Diarrhœa.* But we ſhall ſpeedily have occaſion to conſider this falſe *Diarrhœa* more at large.

We paſs then to another Symptom that is reckoned as common in a *Diarrhœa* as any we have hitherto mentioned; though it is truly extremely rare: we muſt therefore con-

clude, that ſome like Appearance has miſled moſt Authors that have writ on this Diſeaſe. We are told that the *Stools* are full of *Fat* and *Greaſe:* But as fat and greaſy Stools have very ſeldom been obſerved, ſo it is very hard to conceive how they ſhould ever be ſo: for in the Account we gave of the *Guts*, we find nothing of Fat in their *Inſide*, and how *Fat* without them can be conveyed into them, in order to be diſcharged with the Stools, is every way as hard to conceive as the firſt. We may conclude then that *mucous* Stools have always paſſed for *greaſy* Stools; which Suppoſition will more readily be granted, that I have found many eminent Phyſicians in the ſame Error and Miſtake. *Hildanus* is the only Author that gives us a true Account of *fat* and *greaſy* Stools, as far as has occurr'd to me; and in ſome thouſands ill of a Diarrhœa, I have only met with one; which is ſtill more ſurprizing than the ſick Perſon mentioned by *Hildanus*. Now as theſe extraordinary Caſes will be moſt acceptable to an ingenious Reader, and are of great uſe to Phyſicians; it will be neceſſary to relate them before we proceed further in the principal Inquiry.

The Caſe of *Hildanus* is not ſo much the Caſe of a *Looſneſs*, as of a great Quantity of *Fat* voided by Stool that makes it conſiderable

rable and ſurprizing. [a] He tells us of a Matron of fifty Years of Age, that had long complained of a grievous Pain about the Region of the Stomach; and after all Remedies given by Phyſicians, and Empiricks, had proved ineffectual, ſhe fell into a large Evacuation of *Fat*. She had vaſt Gripings and Pain about her Belly, and at laſt ſhe voided above three Pounds of *Fat* in one Day, and recovered. This *Fat* was white, very pure, and incloſed in ſmall Skins and Membranes, which were ſo many particular Diviſions and Cells of *Fat*; but that had no manner of ill Smell. I leave it, ſays *Hildanus*, to any Man to judge where this Fat was bred and kept.

However wonderful this Account was thought by this excellent and experienced Surgeon; yet it falls very ſhort of what happened to my ſelf. In *June* 1718 I was deſired to ſee Mrs. *Compton* a *Lincolnſhire* Lady, who lodged in *Devonſhire-ſtreet*, near *Red-Lion-Square*. This Lady was troubled with a Looſneſs about a Month before I viſited her. She had a Looſneſs, or Diarrhœa, for all that Time, and the Jaundice. There was voided a great deal of liquid Fat, every Time ſhe went to Stool, which harden'd on the Surface of the Stools when they cooled:

[a] Centur. iv. Obſervat. 47.

and if, at other Times, ſhe ſtooped to make Water a good deal of this *Fat* run out by the *Anus*, and congealed upon the Edge of the Pot. This Fat was as white as white Wax, and when I melted it (as I often did in a Shell) was liquid like Marrow, without any Skin or Fibre among it. She could not loſe leſs than an Ounce or ten Drams every Day, one Day with another: So that, at a moderate Computation, ſhe did not loſe leſs than ſixty Ounces of Fat in that Time.

This Lady was recovered of her *Diarrhœa* and *Fat*; or of her Fat and greaſy Stools. She was likewiſe in a fair way to have been cured of her Jaundice, when I was taken ill of a long and violent Fever; ſo that I never ſaw her more. She died while I was confined to my Bed; and was buried in ſo great haſte, that I had not an Opportunity of ſending a skillful Surgeon to ſearch out theſe unknown Paſſages of the Fat into the Guts.

However extraordinary, and unaccountable, this Symptom of fat Stools appears now to be; yet it has not only been reckoned among the common Symptoms of a Diarrhœa, but it has even conſtituted a diſtinct Species of that Diſeaſe, in the Accounts of all Authors, and bears the Name of a *Colliquative Diarrhœa*; wherein the Subſtance of the Body is ſuppoſed to be melted down,

as the Name of that ſuppoſed Sort imports; and that by *Heat* or *Fire*, the common Means for melting *Greaſe* and *Metals*. Some Authors alledge, that this Symptom is frequent when the *Bowels* are inflamed, when a Man is ill of a *burning* Fever, a *hectick* or a *peſtilential* Fever. But as Experience does not vouch for theſe Obſervations, I will not inſiſt on any further Account of them. I am more particularly ſenſible of a common Error about the Water of hectick People, which often carries a *Skim* that *Authors* very *abſurdly* call Fat; but this concerns not the Symptom of greaſy Stools under our Conſideration at this Time.

I am likewiſe ſenſible of the great Decay of Fleſh in the Time of a Diarrhœa, which is very far from being melted away; and this Symptom ſhall ſoon be accounted for in its proper Place, without any want of *Heat* for a Cauſe of waſting by the Violence of a Diarrhœa; which Account will inform us of a Method of Cure without having any Regard to ſuch precarious Cauſes.

I ſhould proceed, in the next Place, in explaining the remaining Symptoms we meet with in the Practice of a Diarrhœa: But as they are nothing ſo conſtant, as theſe I have already accounted for, it will be proper to draw one very uſeful Inference before we attempt any further Explanation.

It is evident, then, that the immediate Cauſe of a Looſneſs *muſt either be a quicker Conveyance of the common Quantity of concocted Food, and of ſuch Liquors as are uſually mixed with it in the Guts: Or, the Cauſe of a Looſneſs is a greater Secretion than ordinary, of a watry Subſtance, from the Blood, by every Kind of Glands in the Guts, or is brought into them by the* Pancreas. *In both which Caſes there muſt needs be a larger Diſcharge of liquid Excrements by Stool than uſual.*

For in the ordinary State of Health the thinner Part of the *Aliment*, after being concocted in the Stomach, paſſes into the *Lacteals*, and there remains only the groſſer and thicker Parts, which are to be voided by Stool; and therefore while things remain in this State, there cannot be a Looſneſs. But if the *periſtaltick* Motion of the Guts ſhould happen to be encreaſed from any Cauſe whatever, that affects the muſcular Coat, or ſtimulates the nervous, the Aliment muſt needs be protruded with a greater Force and Velocity through the Guts; and, conſequently, leſs of it can be ſqueezed into the lacteal Veſſels: And in this Caſe the thin Matter, which, in the ordinary State, paſſes by the Lacteals into the Blood, now mixing with the Matter that is to be voided by Stool, increaſes its Quantity and renders it liquid. Moreover,

ver, if we ſhould ſuppoſe the thin Parts of the Aliment to paſs, as uſually, into the Lacteals, but there ſhould happen, at the ſame time, a much greater Derivation than ordinary, of a fluid Subſtance, from the Blood into the Guts; this Matter will change very much the natural Conſiſtence of the Stools, and increaſe their Quantity; both which, being in the time that the periſtaltick Motion of the Guts is increaſed, the Stools will paſs quickly through them. But if the Liquor is likewiſe ſtimulating, this Effect will ſtill be greater and more ſenſible.

Thus the *Nature* and *Eſſence* of a *Looſneſs* appears from this plain Account; more eſpecially that of a *Diarrhœa.* We will conſider next other *Symptoms* of a *Diarrhœa,* which want due Explication; becauſe a good Account of them does not only confirm what has already been ſhewn, but will be mightily aſſiſting to Phyſicians in curing a *Diarrhœa,* under the Circumſtances of theſe Symptoms; which often occaſion a great Change and Variation from the general Practice of the Diſeaſe.

It is obſerved that People, ill of a Diarrhœa, *loſe* their *Appetite*; or that, frequently, they have not a Deſire to eat. The Reaſon is obvious, if we conſider, that our Deſire to eat is occaſioned by the Emptineſs of the Stomach, and when it is ſtimulated by

the Liquor that helps Concoction, or by the mutual Contact of its own Sides. When therefore there is any Defect of this Liquor, eſpecially in its Quantity, or that the Food does not go well out of the Stomach, as we find both happen when Men have a Looſneſs; it is manifeſt why Men *loſe their* Appetite when they have a *Looſneſs*. Beſides, this Liquor in the Stomach is often ſo vaſtly altered by the Increaſe it ſometimes acquires, that it becomes equally unfit for Concoction and exciting an Appetite, or a Deſire to eat.

People have a *Fever* when ill of a *Diarrhœa*. This Symptom, as I formerly obſerved, is not conſtant, but many have the Diſeaſe without a Fever; though a *Diarrhœa* and a *Fever* have many Properties of the Blood common to both: So that each of theſe Diſeaſes are often Symptoms to one another, when either of them is an eſſential Diſeaſe: For a *Fever* conſiſts in a greater *Velocity* of *Blood* than natural, and ſometimes there is a *Heat* greater than natural. It has likewiſe been ſhewn [a], that this greater *Velocity* of Blood and its *Heat* were occaſioned by an Interruption in Tranſpiration; and it is now manifeſt, that an extraordinary Secretion of watry Parts into the Guts (the Effect of an impeded Tranſpiration,) is the Ma-

[a] Sea-Diſeaſes, pag. 72.

terials

terials of a *Looſneſs*, and of a *Diarrhœa*; and therefore this Impediment of Perſpiration being common in both Caſes, it is evident why a *Fever* is often a Symptom of a *Diarrhœa*.

It is on the ſame Account that the Pulſe is often ſuch as we find in Caſes of a *Fever*; for the Pulſe at all times gives us the *Force* and *Quantity* of Blood in a Man, or ſhews us the preſent State and Condition of a Man in Health and Sickneſs. It has been obſerved, then, that the *Pulſe* is often depreſſed in a *Diarrhœa*; and therefore by knowing the Reaſon why the Pulſe is depreſſed, we have the preſent State of the Blood at this Period of the Diſeaſe. I have ſhewn, in [a] another Place, that the Pulſe is *depreſſed*, when all the Blood impelled into an *Artery*, by the Contraction of the *Heart*, is not derived into the continued *Vein* in its *Syſtole* (or when the *Artery* is contracted) but that ſome Portion of Blood remains unexpelled, and makes the next Dilatation of an *Artery* paſs over a ſmaller Space in the ſame Time. In that Caſe the Artery beats up our Finger with leſs Force, which weaker Impulſe of the Artery againſt our *Finger* is a *depreſs'd Pulſe*. But this Depreſſion is only cauſed by a greater Quan-

[a] Sea-Diſeaſes, pag. 55, 56.

tity

tity of groſſer Blood, as was likewiſe ſhewn; which Thickneſs is cauſed by undue *Tranſpiration*. Now in Time of a *Diarrhœa* there is found the ſame Defect in Tranſpiration; and therefore we may have a *depreſſed Pulſe* when we have a *Diarrhœa*.

The *Pulſe* too is often *little* and *weak* when a Man is ill of a *Diarrhœa*. The Reaſon is obvious; for the Quantity of Blood is leſſened by the Greatneſs of the Evacuation by Stools, and this Quantity of Blood is driven along the Veſſels with leſs Force; on both which Accounts the Pulſe is weak. Let us firſt ſuppoſe the *Syſtole* of the *Heart* natural in its Force, and the Time of its Contraction. In that Caſe the Quantity of Blood being leſſened, a ſmaller Quantity of Blood will be thrown into an *Artery* at every Contraction of the *Heart*: But the diſtending of an *Artery* is as the Quantity of Blood thrown into it at every *Contraction* of the Heart; and the Quantity of Blood being leſs, becauſe of a *Diarrhœa*, the *Arteries* are leſs diſtended at that time; or, in time of a *Diarrhœa* the *Pulſe* is *weak*. Beſides, it is becauſe of this Evacuation out of the Blood, that the *Syſtole* of the *Heart* is weaker; the Heart being a *muſcular* Machine that chiefly propels the Blood. Now the Contraction of the *Heart* is weak by the Loſs the Blood ſuſtains in a *Diarrhœa*; and therefore the

Blood

Blood will be driven out of the left *Ventricle* of the *Heart* with leſs Velocity; as alſo there will be a ſmaller Quantity of Blood impelled into the *Arteries* in the common time; and on that Account they will be leſs diſtended; and therefore, as formerly, the *Pulſe* is often *little* and *weak* while Men have a *Diarrhœa*.

We will next proceed to conſider the Affections of *Urine* in time of a *Diarrhœa*. The Urine is that ſecreted Liquor we can examine the beſt, and that does moſt truly diſcover to us the State of the Blood; eſpecially its *Thickneſs* and *Thinneſs*. Now we find it obſerved by Phyſicians, that People, ill of a *Diarrhœa*, make leſs Urine than natural. This is neceſſary; for as the Liquidneſs of the Stools is often occaſioned by an extraordinary Quantity of the *Serum* of *Blood*, and the *Serum* of *Blood* being the watry Part in the Compoſition of *Urine*, and therefore a Quantity of Serum, greater than natural, being voided when we have liquid Stools, or in time of a Diarrhœa, the Quantity of Urine thro' the Courſe of the Diſeaſe muſt be leſs than natural; as is always obſerved.

Yet the Urine not only commonly continues in its *natural Colour* in time of a *Diarrhœa*, but is likewiſe of a *higher* Colour than natural, or is *lixivial*, in the Language of ſome Phyſicians. For better underſtanding

this

this Symptom, we muſt remember that the Compoſition of Urine is of the foremen-tioned *Serum* of Blood, of *Earth*, and of a particular *Salt* in Urine, in certain and known Proportions. Now if either the Quan-tity of *Serum* is leſs than in the natural Com-poſition of *Urine*, or its ſolid Parts are in a Proportion greater than natural, the *Co-lour* of *Urine* muſt be higher than natural; and therefore in the firſt Caſe, where the Colour of Urine remains natural during a *Diarrhœa*, the Quantity of its Solids is like-wiſe ſeparated in a Quantity ſmaller than na-tural; for the Colour of Urine remaining in a natural State, while the Quantity of Urine is leſs than natural, the Quantity of Solids are in a due Proportion in Time of a *Diar-rhœa*, or the *Water* continues to be *natural* during that time. Thus we may under-ſtand why the *Urine* is *paler* in time of a *Diarrhœa*. On the other Hand, and what is very common, the Urine is of a *high lixivial* Colour in time of a *Diarrhœa*: For the Quantity of Serum being carried off in liquid Stools, the Quantity of Serum ſeparated in the Kidneys is leſs than natural. If then a natural Quantity of the ſolid Compoſition of Urine, paſſes out of the Kidneys with a Quantity of Serum leſs than natural, the Colour of Urine muſt be lixivial and higher than natural; or in a *Diarrhœa*, where there

is

is so great and preternatural a Discharge of *Serum* into the *Guts*, the *Colour* of the Urine must be *high* and *lixivial*.

These are the great Symptoms or Changes of the *Pulse* and *Urine*, while Men are ill with a *Diarrhœa*; and, as they are now explained, are of the greatest Use imaginable in discovering to us the Nature of a *Diarrhœa*, and confirm every other Symptom already explained; as well as in leading us into a true State of the Disease, as in forming the truest and most effectual Methods of curing it. We will, in the next place, consider the dismal Consequences attending the continuing of a *Diarrhœa* for any Time on a Man, and by what Steps Men are carry'd into numberless Calamities by a *Diarrhœa*; which often find their End, and Men their Relief, in *Death*.

It is a Saying of the elegant *Latin Hippocrates*, *Cornel. Celsus*, that *a* Diarrhœa *may keep upon a Man seven Days for his Benefit, when there does not a Fever attend it*. Now, by this Account given of the Nature of a *Diarrhœa*, we are fully apprized how far this *Aphorism* is true; and of the Kind of *Looseness* that admits of so great a Delay, without any Detriment to, and even for the Benefit of, the Sick. In short, no Kind of Looseness but what voids great Quantities of various and unconcocted Humours, can continue with Advantage to the Sick, every other

Diarrhœa

Diarrhœa getting Strength by its Duration; for the longer they laſt, the more violent and irremediable they become: Whereas theſe unconcocted Humours may be diſcharged in the frequent Stools, and the Sick find the Benefit of theſe Stools, in the Recovery of their Health.

However this Obſervation of this elegant Phyſician has been abuſed, either by miſunderſtanding it, or by Phyſicians turning it to ſerve profitable Ends, it is very certain that that excellent Author never deſigned that a Phyſician, in any Age, ſhould leave the Weight of this Diſeaſe upon Nature for ſeven Days, without attempting to bring any Relief in that Time. [a] *It is often for our Health,* ſays *Celſus, to have a Looſneſs for one Day; and for more too, provided there is not a Fever, and that it gives over before the ſeventh.* His Reaſon for the Benefit of a Diarrhœa is the very ſame I aſſigned from obvious Principles; *Becauſe,* ſays he again, *the Body is purged, and that is now profitably voided which muſt have hurt us, if it had been kept in our Body.* But however profitable a *Diarrhœa* may ſometimes prove, in the Opinion of *Celſus,* yet it ought to end *before* the *ſeventh* Day, and to be *without a Fever,* when it is *tolerably ſafe.* Otherwiſe *Delays*

[a] Lib. iv. cap. 19.

may

may be dangerous; for in that Case the Diarrhœa occasions a Bloody-Flux and Fevers, and consumes the Strength. And therefore there is always great Danger when Symptoms of this Nature shew themselves; as the same great Physician assures us, in his second Book: so that a Delay in curing a Diarrhœa is never to be justify'd. *If,* says he, *a Fever attends a Looseness, an Inflammation of the Liver, immoderate Drought,* &c. *there is great Danger of Death.*

In this dangerous State, Physicians are highly to be blamed for neglecting this excellent Advice of the great *Celsus;* but far more, when they cover themselves under this excellent Rule, and prolong the Cure, or keep off better Help, on any lucrative and mercenary Account; for Delays, we see, prove fatal in this Case: and if we consult the following Part of this *Chapter,* we find there his Method of curing in the second, third, and other Days, thro' the Course of the Distemper; quite otherwise than those Physicians represent Matters on this Occasion.

It is certain, as all the Advantages that can possibly be pretended for suffering a *Diarrhœa* to continue for any Time, may be had by an ordinary Purge; so a prudent Physician may attempt the Cure of a Diarrhœa at any time, without any Imputation on him for doing so; and no Physician can answer for

for the Conſequences of Delay, as will appear more at large, when we conſider the *Deſigns* and *Indications* of curing, that will ariſe out of this Doctrine.

This Obſervation is ſo well known to all good Phyſicians, that *Avicenna* tells us expreſly, *There is great Danger in every Sickneſs that begins with a Looſneſs.* This is not only true in *Fact* and *Experience*, but is evident from our foregoing Account of the Symptoms of a *Diarrhœa:* For when a great Quantity of *Serum* is ſeparated, at the Inteſtins, from the Blood, as we find there often is in the worſt Kinds of a *Diarrhœa*, the Blood is then in a very weak State; as it will further appear, when we enquire into the Cauſes of a *Diarrhœa;* which Weakneſs of the Blood increaſes by the Diarrhœa. And therefore our Blood is in an extraordinary ill State, when a Diſeaſe begins with a *Diarrhœa;* more eſpecially that the ill State of the Blood, when any Diſeaſe is formed, becomes worſe by a *Diarrhœa*; which is then a Symptom of that Diſeaſe. This Obſervation then of *Avicenna* and *Phyſicians* is very reaſonable, and forbids our truſting to a *Diarrhœa* for carrying off that Diſeaſe.

Theſe general Followers of a Diarrhœa being conſidered, we proceed to more particular ill Conſequences of a Diarrhœa holding Men for a Time. And firſt, there is a manifeſt

nifeſt and ſenſible *Loſs of Fleſh* in the Perſon that has been long afflicted with a *Diarrhœa*. Our Fleſh, it is known, chiefly conſiſts of Veſſels filled with Blood; and our keeping our Fleſh is nothing elſe than theſe Veſſels keeping to their natural Fulneſs of Blood. Now, as this Blood is every Minute decaying, the Veſſels will become empty, or Men loſe their Fleſh, if this Decay is not ſupply'd by new Recruits for the Blood; and the Decay will be quicker and greater according to the Evacuations from the Blood, or of any Part of its Compoſition; and therefore, whatever the Diſcharge may be from the Blood, the Loſs of Fleſh will be proportionable to the defective Supply the Blood receives.

In a Diarrhœa, then, we found the concocted Food thrown out of the Body in *griping* Stools; and conſequently a great Part of the common Supply carried off another way: In that Caſe, the Decays of the Blood are not repaired; and therefore, there muſt be a *Loſs* of *Fleſh* when the Blood has been, for ſome time, deprived of a Supply for repairing its Loſſes, or in the time of a *Diarrhœa*.

Moreover, we found that the Bulk of Stools in the worſt Kind of a Diarrhœa was a Diſcharge from the Blood; and therefore, in this extraordinary Diſcharge from the Blood, it muſt ſuffer a moſt prodigious Decay; the

Quantity discharged being vastly greater than natural, and the Repair less than natural; and therefore, in the Course of a Diarrhœa, *Men lose their Flesh.*

From this Account of the Loss of Flesh by a *Diarrhœa*, the next Symptom that succeeds, by its long continuing, becomes very manifest; for, by the Loss of Flesh we become *weak* and are *faint*. Now as our Strength consists in a Fulness of our Muscles, and of the Fluidity of our Blood conjunctly; whatever destroys the Fulness of the Muscles, or the Fluidity of the Blood, or its Quantity and Fluidity, at the same time destroys our Strength; and as *Weakness* to Fainting is the reverse of our Strength; therefore whatever destroys the Quantity and Fluidity of Blood renders us *weak* and *faint*: But, by the foregoing Account, the Blood is not duly repaired when we have a Diarrhœa, and the Quantity of Stools is often owing to great and extraordinary Discharges from the Blood. It is, then, evident, why Men are *weak* and *faint* in the Course of a Diarrhœa. Moreover, the Blood in time of a Diarrhœa is likewise thicker; and therefore, for both Considerations, of the Quantity and Fluidity of Blood being lessened, Men are *weak* and *faint*.

This Account explains likewise the *Littleness* of the *Pulse*, and its being *vermicu-*

lar in the continuing of a Diarrhœa; for the Pulſe is great or little, in Proportion to the Quantity of *Blood* impelled into an *Artery* every time the *Heart* is contracted. Now, as the Diſcharge from the Blood has already been found to be very conſiderable, and the natural Quantity of Blood extremely impaired; ſo the Quantity of Blood impelled into an Artery, at every Contraction of the Heart, muſt be very much leſs than natural; and the Pulſe being as the Quantity impelled, the *Pulſe* in time of a *Diarrhœa*, whereby the Quantity of Blood is impaired, becomes *little*.

But after the Diſcharge has been great, and for a long time, the Pulſe has been *vermicular*, or like the crawling of a *Worm*: For when a Worm has its progreſſive Motion, there is a Drawing and Swelling in its forward Part, and a Lankneſs, and Emptineſs in the other, which this Pulſe fitly reſembles. But as this particular Pulſe has never been ſufficiently explained, nor is this the proper Place for doing it, I ſhall not inſiſt on it at preſent, further than that it denotes the ſmalleſt Force in an Animal, as well as a great Loſs of Blood; both which are obvious from what has been ſaid. I know the learned and excellent *Bellini* queſtions the Reality of this Pulſe, and thinks it rather owing to the Manner the Pulſe is felt, than

to any diſtinct Affection of an *Artery*; which is truly a Miſtake of that great Perſon.

Other Diſtempers are made by the continuing of a *Diarrhœa* for any conſiderable time; and *Hippocrates* has long ago informed us, that a *Lienteria* and a *Paſſio Cœliaca* follow a Diarrhœa. In the firſt, our Aliment paſſes through us, without having any great Change made on it, very near as we took it down; but in the laſt, the Quantity of Aliment almoſt intirely goes through us, tho' it be ſomewhat concocted. We cannot conſider this Affection of the Guts any otherwiſe, at preſent, than as the *Lienteria & Cœliaca Paſſio* are Symptoms that ſucceed and follow in the Courſe of a *Diarrhœa*, though hereafter they will be more particularly explained; becauſe Authors conſtitute them a Species of a *Looſneſs*, and therefore, as the Aliment is either altogether unconcocted, or very little concocted, it is far from being liquid: yet it is thrown out of the Body, at ſeveral times, and often in a Day. This happens, by the general Corollary of this Chapter, from the periſtaltick Motion of the Guts being encreaſed, and that by ſtimulating the muſcular Coats of the *Stomach* and *Inteſtins*; which is the only Cauſe whereby the Aliment is protruded with a greater Force and Velocity through the Guts; or that Men have

have a *Paſſio Cœliaca*, or *Lienteria* in the time of a *Diarrhœa*.

It is on this very Account of a *Stimulus*, or of the Sharpneſs of Excrements, that Men have *bloody* Stools ſucceeding a *Diarrhœa*, or that a *Dyſentery* follows a *Diarrhœa*, as *Hippocrates* has obſerved; as alſo, that *it is an ill Sign when a Dyſentery follows a Diarrhœa*. It will hereafter appear, that violent *Griping* attends a *Dyſentery*; inſomuch that the learned *Celſus* denominates the Diſeaſe in the *Roman* Language by this Symptom: But if we conſider that *Griping* is a Symptom of a *Diarrhœa*, and has already been explained as ſuch, it will likewiſe be eaſy to conceive, that *Blood* muſt follow by the Griping only continuing, and far more, when the Griping is become violent, and to a greater Degree, as well as by its continuing. Formerly it was ſhewn, how *Griping* brought off the *Mucus* from the Guts, and that it was thrown out among the Stools in a *Diarrhœa*; and if we now conſider this great Apparatus and Caution of Nature in covering the far greateſt Part of the Guts with this Slime, and in defending them from the natural Sharpneſs of the Excrements, we ſhall become quickly apprized of the great Hurt that enſues the Loſs of the Mucus. The Sharpneſs then, not only provokes Men to go more frequently to Stool, as was ſhewn,

but in the ſame Manner it deſtroys the Mucus, it does in ſome Meaſure tear the *velvet* Coat of the Guts: But the velvet Coat of the Guts is altogether a Congeries of Blood-veſſels ending in the inner Surface of the Guts; and therefore, the ſmalleſt Breach in theſe Veſſels will occaſion a Diſcharge of Blood, which Blood being blended in the Guts with the Excrements, and thrown out in them, when Men go to Stool, there is a *Looſneſs* with Blood in time of a *Diarrhœa*; or, a *Dyſentery* often follows a *Diarrhœa*. This Accident is a very ill Sign, becauſe it is the Effect of an extraordinary Sharpneſs, and is a Loſs of Blood; the firſt, ſhewing the Encreaſe of the Stimulus of a *Diarrhœa*, or of its Griping, and the laſt, ſhews that the *Diarrhœa*, under theſe Circumſtances, is ſtill more dangerous by the Loſs of Blood; ſo that it is always an ill Sign, or that the *Diarrhœa* is worſe, when it is followed with a *Dyſentery*.

What *Hippocrates* afterwards obſerves, looks more paradoxical; that People ſhould become *dropſical* after being long ill of a *Diarrhœa*; for a *Dropſy* is commonly made by an exuberant Quantity of *Serum* in the Blood; and that a *Diarrhœa*, where there is an extraordinary Diſcharge of *Serum*, ſhould be the Cauſe of a Dropſy, may indeed appear contradictory; very ſurprizing at leaſt: But, ſays

ſays *Hippocrates*, [a] *Serapis ſwelled*, or became dropſical, *after a moiſt and liquid Belly*, or after a *Diarrhœa*. Now there is nothing paradoxical in this Obſervation; and if we conſider that it is the Thickneſs of a Liquor, and its not being duly propelled, that makes it ſubſiſt in any Part, and occaſions a Swelling, it will be very plain and obvious why Men ſwell in a *Diarrhœa*, or become *dropſical* by its continuing. By what has been ſaid, we find the Force of the Blood, and of the Heart, vaſtly deſtroyed, and that a great Thickneſs of Blood is frequent in a *Diarrhœa*; and therefore it is very obvious, how Men are *dropſical* in the Courſe of a *Diarrhœa*. This is ſufficient at preſent; tho' there are particular Reaſons why this Swelling is rather in the *Abdomen* and *Legs*, than in any other Parts of the Body: But ſuch Conſiderations can only be made evident in treating the Nature of a *Dropſy*.

After all, we need not wonder that a Diſeaſe wherein we diſcharge *Life* with our Blood, and wherein all the Recruits of our Blood are cut off, ſhould end in *Death*, when no Relief nor Stop can be put to the Progreſs of a *Diarrhœa*. For what is Life, beſides the Circulation of the Blood? And how ſhould the Blood circulate, when its

[a] Lib. 2. Epidem. Sect. 2.

Quantity is run off in Stools, and its Spirits too few to flow into, and contract, the *Heart?* We very lately found Men loſt their Fleſh in the Courſe of a Diarrhœa, that their Pulſe was *weak*; and, next to their having no Pulſe, that it was *vermicular*; and it is but the Conſideration of a Stool or two more, when the *Heart* ceaſes to *contract*, and our Pulſe to beat, and that *Death* puts an End to the miſerable and nauſeous Scene of a *Diarrhœa.*

Having thus from the *Symptoms* of a *Diarrhœa*, diſcovered the *Nature* and *Eſſence* of a Diarrhœa; and from this Diſcovery, the *Symptoms* that *ſucceed* a Diarrhœa have been manifeſtly explained; as alſo many Errors, unavoidable in mere Obſervation, have been rectified during this Inquiry: I might draw many Conſequences of uſe from this Account; but as the great End of all this Reaſoning is, to diſcover the Nature of a *Diarrhœa*, ſo as to raiſe a better and a more perfect way of curing it, and to deliver Men from theſe irkſome Diſorders, as well as to ſtave off cold and hated Death; I proceed next to diſcover, what may be the *antecedent* Cauſes of a Diarrhœa; that we may be able altogether to avoid them, or early to prevent their ill Effects.

CHAP.

CHAP. IV.

Antecedent Cauſes of a DIARRHOEA.

IT is commonly obſerved that cold Weather, a rainy and changeable Seaſon, precede a Diarrhœa. *Hippocrates* ſays, [a] *The Diſeaſes moſt common in rainy Weather are Fevers, a Looſneſs*, &c. And afterwards, *Beſides the mentioned Diſeaſes, there are, in Summer, tertian and quartan Agues, Vomitings and Fluxes. Unwholſome Food often occaſions a Looſneſs*, and *Meat* hard to be *concocted*; as alſo, *early* and *unripe Fruit*, a too *great Doſe* of a *purging* Medicine. *Old People are ſubject to Fluxes. Hippocrates* alledges, that Air coming from the Head [b] *cauſes frothy* Stools.

Hippocrates has long ago warned Phyſicians againſt the Fallacy of Experience; for whoever has but the leaſt Experience in Phyſick, muſt be ſenſible, that he has not made any great Number of Obſervations, before he complains of Experience being fallacious. Numberleſs Examples might be brought to confirm this Obſervation by Experience; but as we have already given ſome, in the fore-

[a] Aphor. 16. Sect. 3. [b] Aphor. 30. Sect. 7.

going

going Chapter, and many more will occur in this; the Truth of what I alledge will ſpeedily be made appear. What is already diſcovered, that every Looſneſs is produced univerſally by *ſtimulating the Guts*, or by *rendering the Excrements more liquid*, equally aſſiſts us in explaining the Cauſes, and in determining what is truly the Cauſe of a Looſneſs: For if any ſuppoſed Cauſe, appearing in time of a Looſneſs, does not excite the Motion of the Guts, nor renders the Excrements more liquid; it is certain, that this is no productive Cauſe of a Looſneſs, but is that Fallacy of a wrong Cauſe, being aſſigned for the true Cauſe; as Philoſophers expreſs themſelves.

We proceed then to explain the *antecedent Cauſes of a Diarrhœa*, as they are commonly aſſigned by Phyſicians: And firſt, *cold Air* is a very common Cauſe of a Diarrhœa; for it occaſions an extraordinary Quantity of a watry Humour to be ſeparated from the Blood in diverſe Parts of the Body. By the Coldneſs of Air, the Pores or Paſſages of the Skin are contracted; and thus are rendered more impervious to the Matter of Perſpiration: But the Matter of Perſpiration conſiſts of the ſerous Parts of the Blood, and far exceeds all other Liquors, ſeparated from the Blood, in Quantity; but, at this time, as it is unduly voided by the Smallneſs of

of the Pores, it is on this Account ſecreted at other Organs of Evacuation; and the Diſcharges at theſe Organs will be increaſed in ſome Proportion to the Difference of the impeded Tranſpiration. It is likewiſe known, that when at any time the Secretion at the *Glands* of the *Skin* proves any ways defective, through the Fault of the *Glands*, or of their *excretory* Ducts, or Pores, the redundant Liquor is moſt readily ſeparatted at the *Glands* of the *Guts*; and therefore, a Quantity of Water, greater than natural, being ſecreted at the *Glands* of the *Guts*, becauſe of the Coldneſs of Air, renders the Excrements more liquid than they are naturally, and, on this Account, is the Cauſe of a Looſneſs; as was manifeſt by the general Corollary in the foregoing Chapter: And therefore cold Air is truly and properly a Cauſe of a Looſneſs, as was ſuppoſed upon Obſervation. In the Winter 1708 the Froſt was very ſtrong, and at the ſame time there was a great Fall of *Snow*; and a *Diarrhœa* was the common Diſeaſe in *London*, in the Months of *January* and *February*, that Year.

Not only cold and froſty Weather is found to be a Cauſe of a Looſneſs, but even *rainy* and *changeable* Weather have produced the Diſeaſe, by the Experience of Phyſicians. However oppoſite this State of Air is to the

the former. We know, that *rainy* Weather both thickens the Blood, and leſſens its Velocity; and, on that Account, it leſſens alſo the Quantity of Tranſpiration, which is always as the Velocity and Fluidity of the Blood. Now the Quantity of Perſpiration being leſs, becauſe of the Blood's thickneſs, the Difference of tranſpirable Matter will be ſeparated at the Parts where the Blood is moſt fluid, and where watry Parts are commonly ſecreted: But theſe Parts are thoſe neareſt the Heart, where the firſt Separations are made from the Blood, after it is expelled out of the left Ventricle of the Heart; and the Guts being in the Number in this Vicinity, the Difference of this tranſpirable Matter, unſecreted in the Glands of the Skin, will be ſecreted at the Glands of the Guts. And therefore *rainy* Weather being the Cauſe of a greater Quantity of Water being diſcharged into the Guts, it is likewiſe the Cauſe of a Looſneſs; and that, becauſe Excrements more liquid than ordinary are the immediate Cauſe of a *Looſneſs*, and is a *Looſneſs* it ſelf; as we formerly proved.

Thus oppoſite and contrary Cauſes often produce the ſame Effects, when attended with ſmall and different Circumſtances; and this laſt Obſervation of a *Looſneſs* being occaſioned by *rainy* Weather, is as obvious and reaſonable, as that it is produced by cold,

frosty Weather. A *Looseness* so constantly follows *Rain* in the *West-Indies*, that the People there say commonly, *It rains a Looseness*; and *Hippocrates* has long ago informed us, that the Diseases most common in rainy Weather are a *Looseness*, &c.

What *Hippocrates* adds afterwards is a very particular Observation, and is very constant to this Day in the Islands of the *Archipelago*, and in the *Mediterranean*. He says, that *in Summer there are the mentioned Distempers*, (of the Spring) *and continual burning Fevers, and tertian and quartan Agues, Vomiting, and every kind of Looseness*: For in small Islands, foggy, rainy, and changeable Weather being very common, a *Looseness* commonly produced by this kind of Weather becomes likewise common, as I have but just now shewn; as, on the other Hand, a *Looseness* and Summer-Agues are very seldom observed on the *Mainlands*, which are always more *dry*, and not so subject to *Foggs* and *Rain*.

The next *antecedent* Cause of a Looseness, alledged by Physicians, is *unwholsome Food*. Our *Food*, or *Aliment*, is then said to be *unwholsome*, when it either affords us *little* Nourishment, or that which is *hurtful*; which *Food*, under both the mentioned Circumstances, may cause a *Looseness*. In the first Case, Food of small Nourishment, abstracting

ſtracting from its being very ſubject to corrupt and decay, is the Cauſe of a Looſneſs, when weakly Conſtitutions are not ſufficiently ſupported by it; for then, the principal Secretion becomes defective, and, on that Account, Food of little Nouriſhnent is the *Cauſe* of a *Looſneſs*, in the way that is now manifeſt from what has often been ſaid.

But if our Aliment is *hurtful*, or becomes ſo, by filling the Blood with watry Humours, or by cauſing a great Diſcharge of Water into the Guts, or, laſtly, by producing an extraordinary Quantity of *Gall*, and other ſtimulating Humours; our Food, I ſay, is then the Cauſe of a *Looſneſs*; becauſe each of theſe alone, and of themſelves, have been found to be immediate *Cauſes* of a *Looſneſs*, and muſt, on that Account, occaſion it more powerfully when they work together. It muſt be confeſſed, that Phyſicians are not ſufficiently acquainted with Food that have ſuch Effects upon us; but they very well deſerve our greateſt Conſideration. To give an Inſtance in things of daily and general uſe. Do we not find Phyſicians ſtrictly forbidding the Uſe of *Veal* to their *Sick* of a Looſneſs, and recommending to them *Mutton* for their Diet? when *Veal* with all its Slipperineſs has little Power to promote the Purging; and the Purging is powerfully promoted

moted by a Meal of *Mutton*, contrary to the common Rules of Phyſicians.

Hippocrates writes, that he is the firſt Perſon, who has conſidered the Power of *Diet*; which Work is of great uſe, and was always well eſteemed, while Phyſicians regarded this Branch of Phyſick: But this third Mean of curing has been ſhamefully neglected of late. *Sanctorius* has left us many uſeful Experiments of the Effects of Food in Tranſpiration, in his excellent Treatiſe of *ſtatick* Phyſick. Among many other Obſervations, he tells us, that it is hurtful to eat *Muſhrooms*, *Hogs-fleſh*, &c. *It is an ill Cuſtom*, ſays that experienced Author, *to eat Swine's Fleſh and Muſhrooms*; *both becauſe they do not perſpire, as alſo becauſe they hinder the Meat we take at the ſame time, to perſpire.* And in the next *Aphoriſm*, he is particular in how much they hurt the Tranſpiration. *The Body commonly perſpires a third leſs, than at other times, by eating Muſhrooms and Swine's Fleſh. Melons*, ſays *Sanctorius*, *perſpire ſo very little, that they keep off a fourth Part of the common Perſpiration.*

Thus the great Changes made in the Body by *Diet* is very manifeſt, by theſe few undeniable Inſtances: But if every thing we eat and drink hath ſuch an Influence upon us in Health, how far greater muſt the Power of *Diet* be on us in Sickneſs? By *Diet*,

Diet, without doubt, we may be cured of many Diſeaſes, as great *Sects* of *Phyſicians* have maintained: At leaſt, then, proper *Diet* is always a great Help in the Cure of every Diſtemper. And as every Diſtemper may be conquered by proper *Diet*, ſo unwholſom and improper *Diet* is the great Support of every Diſeaſe. Thus well does the Matter of Diet deſerve our Study and moſt ſerious Conſideration.

Food *hard* to be *concocted* might have been comprehended in the foregoing Article; becauſe it yields little Nouriſhment, and is, for that Reaſon, the Cauſe of a *Looſneſs*. But beſides that Conſideration, *Food* of difficult Concoction very readily *corrupts*, and thus acquires a great Acrimony and Sharpneſs. Now, if by the Sharpneſs of what is contained in the Guts, their *nervous Coat* is ſtimulated, and their *muſcular Coat* is more violently contracted; but by this more vehement and more frequent Contraction of the Guts, their Contents are oftener expelled, and thoſe Contents being *Food* hard to be concocted, have ſent little Chyle into the Lacteals; therefore, in the preſent Caſe, the Stools are larger, more liquid, and oftener expelled; or, there is a Diarrhœa by *Food* hard to be *concocted*.

Under this Head of Aliment, *Fruit* is next to be conſidered; more eſpecially, Fruit that is not

not ripe. It is the Experience of every Country, that *unripe Fruit* very commonly *cauſes* a *Diarrhœa*. Even Countries not otherwiſe ſubject to the Diſeaſe, feel theſe Effects of Fruit in the Seaſon. *France*, viz. *Spain* and *Italy*, give many Examples of *Fluxes* in the *Grape-Seaſon*, in time of the *Vintage*, and when the *Wine* is drunk very new: then a Looſneſs is very common, and very mortal. The Reaſon is obvious; for the *Juice* of *Fruit* gives a Quantity of ſerous Parts to the Blood, as well as increaſes its Lentor. Now the Quantity of Blood encreaſed with a Lentor leſſens Perſpiration, and occaſions a great Quantity of *Lympha* to be ſecreted in the Glands of the Guts; which extraordinary Secretion alone, while their periſtaltick Motion is natural, we find is the *Eſſence* of a *Diarrhœa*. Thus *unripe* Fruit is truly an *antecedent* Cauſe of a Diarrhœa. Beſides, all unripe Fruit is in it ſelf ſharp and ſtimulating, and the ripeſt Fruit becomes ſo by being corrupted; and therefore, as unripe Fruit excites the periſtaltick Motion of the Guts, and at the ſame time encreaſes the Secretion there, *unripe Fruit* is a moſt powerful *Cauſe* of a *Diarrhœa*. *Sanctorius* informs us, that *Grapes and new Figs make Men perſpire little, and hinder a little the Perſpiration of other Aliment; becauſe, perhaps, they make ſenſible Evacuations.*

A dangerous *Looſneſs* has been obſerved to follow too *ſtrong* a *Doſe* of a *purging* Medicine. Purging by Medicines is making a *Looſneſs* for a ſmall time; and the *Doſe* of a purging Medicine, when it continues the Looſneſs to a longer time, has certainly exceeded the Strength of the Conſtitution. And therefore, as a *Doſe* of a purging Medicine can carry on the *Looſneſs* to a conſiderable time, it may be very properly reckoned among the *antecedent Cauſes* of a *Looſneſs*. This Truth will appear more particularly, if we conſider the Difficulties, nay, a ſuppoſed Impoſſibility, there was in finding the due Doſes of purging Medicines, [a] before I taught Phyſicians the Method of finding them for every Conſtitution; eſpecially if we conſider, that I proved, that the Operation of purging Medicines is to make a greater Separation of watry Parts into the *Guts*; and therefore when the Doſe of a purging Medicine is too ſtrong for a Perſon's Conſtitution, it muſt carry on the *Looſneſs* too long; or it muſt make a *Diarrhœa*. This Inconveniency is quickly mended by a healthy Conſtitution, and a few Days redreſs the Error: But in other Conſtitutions, which are weakened by the Quantity of the Diſcharge, the Diſeaſe gets head, and increaſes by this

[a] Philoſoph. Tranſact. N°. 303.

Weakneſs,

Weakneſs, which is occaſioned by the Evacuation.

This Error is often fatal, as well as very common, among the Practiſers in Midwifry; and they frequently *miſcarry* by giving Women extraordinary ſtrong Purges after *Abortion*: for as they too commonly take Advantages of this weak Side of *Women*, and drench them, and their Purſes, under a Pretence of cleanſing their *Wombs*; they not only make uſe of the ſtrongeſt Purges, but make no Diſtinction as to the Strength of the Perſons that are to take them; and thus throw many *weak Women* into a dangerous *Looſneſs*, that often ends in a *Conſumption*, and a *hectick Fever*. But this fond Conceit of the *fair Sex* for Men Midwives, is commonly as much paſt remedying, and without a Cure, as the Knowledge of theſe Practitioners.

What is thus explained leads us a little into the Reaſon, why *old People* are commonly ſubject to a *Diarrhœa*; and that *old Age* ſhould be an *antecedent Cauſe* of it. For in *old Age* the Veſſels are harder, and the Liquors of the Body are thinner: the firſt is evident, and the laſt is manifeſt by my Account of the Doſes of purging and vomiting Medicines. In the firſt Caſe, the *Arteries*, being hard by Age, become a mighty Reſiſtance to the moving Blood. Moreover,

over, *Arteries* loſe their Springyneſs by their Hardneſs, and the Blood its Velocity. But the Blood loſing its natural Velocity, the Quantity of tranſpired Matter is leſs than natural, and the *Stools* are rendered more *liquid* than natural; or we have a *Looſneſs*. Beſides, the Blood in *old People* being thinner, and more watry, than is the Blood of young People, and leſs of that Water being voided by Perſpiration (as has been ſhewn) the Quantity of watry Parts *ſecreted* at the *Glands* of the *Guts* muſt be much greater than natural; and the Stools become much more liquid, *h. e.* Men, becauſe of *old Age*, are very ſubject to a *Looſneſs*; or *old Age* is an *antecedent Cauſe* of a *Looſneſs*.

[a] *Hippocrates* alledges, that a *Looſneſs* with *frothy* Stools comes from the Head. I have already accounted for the Stools being *frothy*, and their fermenting; but at preſent it will be uſeful to relate what *Hippocrates* would teach us, when he aſſerts, that the *Cauſe* of *Froth* is bred in, and proceeds out of, the Brain. The *Brain*, according to [b] *Hippocrates*, *is the Seat and Matrice of what is cold and glutinous*; and it is the common Reaſoning, that every Diſeaſe having its Origin from *Phlegm*, or any cold Humour, comes from the *Head*. But as the

[a] Aph. 30. Sect. vii. [b] Lib. de Carnib. pag. 208, 209. Fœſ.

Suppo-

Suppoſition of *Phlegm* and *cold* Humours being bred in the *Brain*, and the Conveyance of theſe Humours into different Parts of the Body, in forming Diſeaſes, is falſe and impoſſible, we will not purſue Notions of this Kind; however common this kind of *Theory* be ſtill among Phyſicians. *L. Riverius*, and other Phyſicians, who were perſuaded that the Cauſe of the *Frothineſs* of *Stools* might be found in the *Stomach* and *Inteſtins*, have long ago queſtioned the *Diagnoſtick* of the *Aphoriſm*.

Hippocrates likewiſe tells us, [a] that *the Heart is the Fountain of Blood, the Spleen of Water, and that the Liver is the Place of the Gall*; from all which, in the Opinion of Phyſicians, flow ſeveral Species of a *Looſneſs*. If a *Diarrhœa* proceeds from a Fault of the *Liver*, there are Signs of a *hot* Indiſpoſition, of *Inflammation*, of an *Obſtruction*, or of ſome other *Affection* of that Part. When the *Spleen* is charged with a *Diarrhœa*, there is ſuppoſed to be a *Swelling* and Tenſeneſs in the left *Hypochondre*, or a Weight, or elſe a Pain in that Part; and the *Stools* are *black*. But if the *Meſentery* raiſes a *Diarrhœa*, in that Caſe a *thick* and mucous Subſtance is voided at Times, eſpecially in the Day time. So far have Authors been miſ-

[a] Lib. 4. de Morb. pag. 502.

led by theſe falſe and partial Cauſes of a *Diarrhœa*, that they have not left any blameleſs Part, beſides the *Heart*; and even the *Womb* is ſometimes ſuppoſed to be the Cauſe of a *Diarrhœa*, which we may know by a *Suppreſſion* and *Stoppage* of the *Courſes* at that time, as well as by ſome other Affections peculiar to the *Womb*.

Now as none, almoſt, of the mentioned Parts breed any of the ſuppoſed Humours, neither have they any Communication with the *Guts*; ſo it is manifeſt, that theſe alledged *antecedent Cauſes* are not truly *Cauſes*. Thus we may judge of any other Cauſe that, at any time, may be ſuppoſed to be the Cauſe of a Looſneſs; and determine, whether it is a ſufficient Cauſe, or not. The Signs of theſe Cauſes are as obſcure as the Cauſes are falſe: For to mention one Inſtance only; Why muſt there be a *Stoppage* in a *Woman* that is ill of a *Looſneſs*? or, Whether is it more natural to aſſign a *Diarrhœa* for the Cauſe of the *Stoppage*, or this for the Cauſe of the former? A *Diarrhœa* running long upon a Woman leſſens the Quantity of her Blood, and deſtroys its Force; ſo that a *Diarrhœa* may truly produce a *Stoppage* of a *Woman's Courſes*; but a *Stoppage* of them can never occaſion a *Diarrhœa*.

Authors

Authors neceſſarily fall into theſe and ſuch like Miſtakes for want of a Method of reaſoning, and are unavoidable, when they collect Symptoms without a Skill in comparing them. Upon this Account Phyſicians were perplexed with another Kind of *Diarrhœa*; a *ſymptomatick* and a *critical Diarrhœa*. But if we conſider, that there is no peculiar Symptom alledged for this Kind of *Looſneſs*, it is plainly no particular Species. Phyſicians, indeed, obſerved, that a *Looſneſs* attended every Diſeaſe, and that very often a Diſeaſe was cured by the *Looſneſs*; and this they found determined the Diſeaſe, or was its *Criſis*; and therefore a *Looſneſs* that put an end to a Diſeaſe was properly called a *critical Looſneſs*. On the other Hand, Phyſicians finding that a *Diarrhœa* did not cure the Diſeaſe it attended; but that rather the Diſeaſe encreaſed and became worſe, in the Company of a *Diarrhœa*; did therefore mark it out under the Name of a *ſymptomatick Diarrhœa*: But ſtill the *Diarrhœa* appears with its common Symptoms, or is a common *Diarrhœa*: and no different Species of it, whatever Influence it may have on the Diſeaſe it attends. Phyſical Writers have ſo very ſlender a Notion of a *ſymptomatick* and of a *critical Diarrhœa*, and far leſs when a *Diarrhœa* will prove a *Criſis* or a *Symptom* of the Diſeaſe it accom-

panies, that they can ſcarcely give us an Idea of it in their beſt Deſcriptions, when they repreſent it as a different *Species* of a *Diarrhœa*. *This Kind of Diarrhœa*, ſays [a] *Sennertus, differs on Account of the Way it affects us, and of its efficient Cauſe.* But, as I obſerved, the Manner after which a ſymptomatick or a critical *Diarrhœa* attacks us is nothing different from that of a common Looſneſs; and, as far as can be diſcovered, its efficient Cauſe is the ſame; and, conſequently, a *critical* and *ſymptomatick Diarrhœa* do not conſtitute a different Species of that Diſeaſe. What follows in that excellent Phyſician is very true, though it be not ſufficient to vouch for this Diviſion of a *Diarrhœa*; nor is he able to determine when a *Diarrhœa*, falling in with another Diſeaſe, is *ſalutary* or *pernicious*; or, is a *critical* or a *ſymptomatick Diarrhœa*. However true the Fact may be, the Difficulty of reſolving, upon the Spot, on the Courſe moſt proper to be purſued is ſo great, that we find neither the Method nor diſtinctive Marks in Phyſick Books, nor in the Practice of Phyſicians; but what may be truly collected from the foregoing *Theory*, or Explanation of Symptoms. *Lazarus Riverius* has endeavoured to give us a more particular Mark of this important Dif-

[a] Pract. Lib. iii. Part ii. Sect. ii. Cap. vi. de Diarrhœa.

ference

ference between these two Sorts of a *Diarrhœa.* [b] *We may reckon,* says this excellent Physician, *a serous, or watry Looseness, among such as are critical, which affects Men without any forerunning Distemper, and who abound with too great a Quantity of Serum in their Veins; more especially about the Autumn, when the Night or Morning Cold finds the Pores and Passages in the Skin open, after the Heats of the former Season; and, on that Account, sinks deeper into the Body, and forces downwards the watry Humours kept in the Veins; which Nature afterwards, oppressed with this Load, drives into the Guts by the Meseraick Veins.* But, by the foregoing *Chapter,* we find the Manner of this *Diarrhœa* is very common, and was there explained as a common Symptom of a *Diarrhœa*; and therefore *watry Stools* are neither a distinctive Mark, nor do they denote the Safety of the Disease. On the contrary, these Stools commonly constitute the worst Kind of a *Diarrhœa.*

The Learned *Riverius* finds it altogether as difficult to settle the Notion of a symptomatick *Diarrhœa,* when he tells us, *that a symptomatick Diarrhœa becomes often colliquative in hot Fevers*; and then adds the Marks of a *colliquative Diarrhœa,* we formerly considered. Thus it is plainly a Mat-

[b] Lib. x. cap. v.

ter

ter of the greateſt Importance for Phyſicians to be able to diſcover, when a *Diarrhœa* that attends another Diſeaſe, will become the *Cure*, or the *Ruin*, of a Perſon afflicted with that Diſeaſe: For *Life* or *Death* is the immediate Conſequence of a Reſolution that muſt be taken in that Minute of Time. In vain Phyſicians ſeek for Marks in the Stools themſelves, or in the Way or Manner they are voided. It is a common *Diarrhœa*, in every reſpect, that is in Company with another Diſtemper; and therefore there cannot any Sign be had from the *Diarrhœa* alone, whereby we may judge of its being *ſalutary* or *pernicious*, *critical* or *ſymptomatick*: The *Nature* and *Circumſtances* of the Diſeaſe the Diarrhœa follows, is to be compared with the Quantity and Temper of the Flux, in order to determine, whether the Preſence of the *Diarrhœa* will be hurtful, or profitable, in the given Caſe of theſe two Diſeaſes.

Phyſicians have as unneceſſarily puzzled and perplexed themſelves, as they have done it without Succeſs; for the Queſtion of a *Diarrhœa* being *critical* or *ſymptomatick*, is the ſame as if it were put of any other Sort of Evacuation. Inſtead then of a *Diarrhœa*, let the Queſtion be made of a *Hemorrhage*, or an Evacuation of Blood, in a Diſeaſe: Experience teaches us, as formerly, that an

Evacuation

Evacuation of *Blood* often cures a *Diſeaſe*, when at other Times it makes it worſe, and even puts it beyond the Power of being cured. The firſt is called a critical *Hemorrhage*, while the laſt is *ſymptomatick*; as was ſpoke in the Caſe of a *Diarrhœa*. We do not find that Phyſicians conſult the *Looks* of the Blood, or the *Manner* of its being evacuated, in order to determine the Queſtion of a *Criſis*; nor can it be alledged, that conſulting the Stools is more neceſſary. Indeed, the Queſtion in both Caſes is ſo much alike, that we may determine by the ſame Method, and in the ſame Number of Words, whether a *Hemorrhage*, or a *Diarrhœa*, is *critical*, or *ſymtomatick*, without having any Regard to the Condition of the Blood, or of the Stools, or of the Manner they are diſcharged.

The Reaſoning and *Theory* of a *Diarrhœa*, which has diſcovered its Nature and Cauſes, and has corrected many Errors from imperfect Obſervation, will, with certainty, clear one Side of the Queſtion, and that ſo clearly, that we cannot fail to compare a *Diarrhœa*, in Conjunction with any given Diſtemper, after the Nature of that Diſtemper is made as evident as the *Nature* of a *Diarrhœa* is at preſent.

On the other Hand, would we know the Uſefulneſs of a true *Theory* of a *Diarrhœa*,

or

or how much that is wanting at preſent in the Practice of Phyſick; we can eaſily diſcover both in the Obſervations of Phyſicians about ſome Diſeaſes accompanied, or complicated, with a *Diarrhœa*; which I will barely relate, and leave them as Problems for every Phyſician, to try how he has profited by the preſent *Theory* of a *Diarrhœa*.

[a] *You may pronounce,* ſays *Hippocrates, that this Perſon will die in a little Time, and that of a Looſneſs: For when Pus has corrupted about the Heart,* and a Part *of it is laid on a red hot Coal, it ſends up a ſtinking Vapour; which is ſaltiſh when the Brain is heated at the ſame Time, and excites a Looſneſs.*

[b] *Diſeaſes in the Sides, Inflammations of the Lungs, hot Fevers, and other reputed acute Diſeaſes, cannot be, nor come to any great Height, when Men go looſe to Stool*; in the Opinion of *Hippocrates*.

[c] The ſame Author informs us, that *a Diarrhœa is pernicious in Caſe of a Pleuriſy, Empyema, or a Peripneumonia.* [d] *Among the* Ceniadæ, Scomphus *died the ſeventh Day, being ill of a Pleuriſy: But he had taken a purging Draught, which did not purge him a great deal, and was in his*

[a] Lib. 2. de Morb. pag. 447. [b] Lib. de Aere, Loc. & Aq. [c] Lib. 1. de Morb.

Senſes before he drunk it; yet he became delirious in the purging, and that as ſoon as it began to work.

[a] *Zacutus Luſitanus* relates much ſuch another Caſe, when a Purge ſtop'd the Spitting, and the Perſon died.

[b] *Hippocrates* obſerves, that a *Diarrhœa* with a hot *Fever* is very dangerous. He ſays too, [c] that a *Diarrhœa* coming with a *Leucophlegmatia*, certainly cures it. Yet we heard formerly, that this kind of *Dropſy* is ſometimes produced by the continuing of a *Diarrhœa.*

CHAP. V.

The Prognoſticks of a DIARRHOEA.

HAving, in the foregoing Chapters, diſcovered the Nature of a *Diarrhœa* and aſſigned its Cauſes, I am led naturally to deduce practical Inferences that are uſeful for our Information, and that inſtruct us in the Cure of a *Diarrhœa.* The firſt Inferences Authors commonly make, at

[a] Lib. 2. prax. mirandæ Obſerv. 116. [b] Coav. præn. 129. [c] Aph. 28. Sect. 7. [d] Lib. 5. Epidem.

this

this Time, are about the *Cureableneſs* or *Incureableneſs* of an aſſigned Caſe of a *Diarrhœa*; or they propoſe to determine what Kind of a *Diarrhœa*, formerly related, is in its own Nature moſt eaſily cured; and under what Circumſtance a moſt kindly Sort becomes hard, or impoſſible to be cured.

This piece of Knowledge gives great Comfort to the Sick, and brings Honour to Phyſicians. A ſick Perſon puts great Confidence in a Phyſician who is known to have commonly foretold Events of Diſeaſes, and Phyſicians are not only well eſteemed on this Account, but are taught likewiſe how to behave themſelves like prudent Men; and, as *Corn. Celſus* adviſes them, not to meddle with ſuch ſick as cannot be cured, leſt they riſque the Calumny of having killed the Perſon, whoſe Condition was not to be retrieved. Hence the Prince of Phyſicians, *Hippocrates*, recommends moſt effectually the ſtudying prognoſtick Signs to Phyſicians. *It behoves* (ſays that excellent Perſon) *a Phyſician, in my Opinion, to foreſee what may happen through the Courſe of a Diſtemper: For the Phyſician who is apprized of the preſent Condition of the Sick, and of what has already paſſed in the Time of their Sickneſs, as well as* foretold *what is ſtill to come, and can diſcover thoſe Obſervations they had overlooked, procures to himſelf the Character of thoroughly underſtand-*

underſtanding the State of the Sick; and they, with great Alacrity, put *themſelves under the Direction of ſuch a Phyſician.* The ſame *Chief* in Phyſick ſo far approves of this way of taking the Character of a Phyſician, that he confirms the Judgment of the People with his own Declaration. *That Phyſician is the beſt able to conduct the Courſe of a Cure, who is beſt apprized of all the Accidents that are likely to happen in that time.*

It is no Wonder then that *Prognoſticks* have been the conſtant Study of the beſt Phyſicians in every Age, and that every *Impoſtor* has pretended to great Skill in Prognoſticks in all theſe Ages: Theſe crafty Rogues have ſucceeded in their Deluſions and impoſing on the People, while the Followers of *Hippocrates* in his Integrity, as well as in his Study of Phyſick, attending to the Courſe of Diſeaſes, have found it very difficult and laborious to make a conſiderable Progreſs in this deſireable Art. Experience alone, and of it ſelf, is altogether inſufficient for this Purpoſe; for if we conſider our ſmall Stock of Prognoſticks, tho' they have been collected by Men of great Prudence, Sagacity and Practice, we may conclude, that this Kind of Experience is not a ſufficient Method for attaining any Certainty that Way. Very few of the Prognoſticks recorded by

Phyſicians let us in to the preſent State of the Sick; as few apprize us of their future Events; and none of them inform us of what has already paſſed in the time of a particular Sickneſs.

Before I proceed in the true Method of forming Prognoſticks, it will be proper to relate the preſent State of this Knowledge; where we may ſee what a ſlender Idea one of the beſt Books on that Subject affords us, and how little that excellent Author ſeems to have underſtood what is wanting for rendering that Knowledge tolerably perfect. For as in Phyſick Books Diſeaſes are repreſented as a War and Conflict with Nature, ſo Prognoſticks are repreſented as a Skill of diſcerning to what Side Victory inclines: But however true this Allegory may be in the Main, the Means of attaining this Judgment are very inſufficient. The learned *Proſper Alpinus* thus repreſents Matters, [a] *They that would diſcover the Art of foretelling the State of the Sick, ought chiefly to underſtand from whence it may be taken. There are two things neceſſary for this Purpoſe; one a* Diſeaſe, *which invades a Man's Body, and endeavours to deſtroy it; the other* Nature, *who like a Governor of a Fortreſs, reſting in the Body, endeavours to defend it from*

[a] Chap. I.

a Diſeaſe,

a Diſeaſe, as if that were the Commander of an Army, that came to attack and conquer the Body. And as the Leader of an Army makes uſe of many Soldiers in carrying a Caſtle, ſome whereof attack it in one Place, ſome in another; ſo a Diſeaſe makes uſe of many Symptoms and other Diſeaſes, inſtead of Soldiers, in the Attacks of ſundry Parts of the Body at the ſame time. On the other Side Nature, a diligent Defender of the Body from every Inſult made upon it, ſtruggles with all its Power, that the Body may not ſurrender nor ſubmit to the Diſeaſe.

Now this Allegory is not only defective, but it is likewiſe falſe; for every Diſeaſe that attends a principal Diſeaſe is produced by the Diſeaſe, and is its Symptom. A Symptom then is an Effect of a Diſeaſe, which diſcovers to us the Diſeaſe it ſelf, and its very Nature, when Symptoms are throughly examined; and in the Senſe of the Allegory are rendered its *Spyes* in the Diſcovery. But not to make uſe of *Figures* in Philoſophy, a Prognoſtick is a Declaration of a Phyſician's *Expectation* in curing a ſick Perſon. This Expectation can only be taken from the *Nature* of the *Diſeaſe*, the *Quantity* and *Intenſneſs* of it, and the natural Strength of the Sick. And therefore, the Knowledge of Prognoſticks is not otherwiſe

to be acquired than by inveſtigating the *diagnoſtick* Marks of a Diſeaſe, whereby its Nature is diſcovered, and, with it, the Quantity of the Diſeaſe, and the Strength of the Sick.

But as the *Nature* and *Cauſes* of a *Diarrhœa* have been the Subject of the two foregoing Chapters, I will at preſent give the *prognoſtick* Signs of a *Diarrhœa*, as they flow from that Account, and, together with them, the Prognoſticks of the Ancients; which I leave with Phyſicians, to determine, which of them are moſt uſeful in aſſiſting them in *foreſhewing* and *foretelling* the Iſſue and Event of any particular Caſe of a *Diarrhœa*.

As then a Looſneſs, or a *Diarrhœa*, proceeds either from an extraordinary Contraction of the Guts, or from a greater Liquidity of their Contents, or of Excrements; it manifeſtly follows, that the Strength in two ſick Perſons being alike, a *Diarrhœa*, with watry Stools, is far worſe than a *Diarrhœa* produced by ſharp Humours in the *Guts*, and that excite their extraordinary Contraction. For, by what has been ſhewn, watry Stools are Defects in the Blood, and encreaſe by their continuing; as, on the other Hand, a *Diarrhœa* from ſharp Humours diſcharges its Cauſe, and is cured by continuing for ſome little time. And therefore,

fore, a *Diarrhœa* with Griping, and without Water, is safer, and is more easily cured, than a *Diarrhœa* wherein Water is chiefly voided, and is seldom attended with Griping.

But to be more particular, we will next assign some of the Species of a *Diarrhœa*, under each of these two general Heads, with the Danger that will attend each of them considered in the same Circumstances in every other Respect, but what they have to their top and general Sort. First then, it having been proved in Chapter III. that a *Diarrhœa* is caused by the *peristaltick* Motion of the *Guts* being encreased, and in Chapter IV. that *unwholsome* Food, Food *hard* to be *concocted*, *unripe Fruit*, and too *strong* a Dose of purging Medicines are Causes exciting the *peristaltick* Motion of the *Guts*; it therefore follows, that each of these Causes will most effectually keep up a *Diarrhœa* in proportion to their Power, to provoke the *Guts*, and excite their *peristaltick* Motion.

In that Case, the too strong Dose of a purging Medicine commonly, and every thing besides being alike, works it self off the soonest; and is on that Account a *Diarrhœa* of the shortest Duration.

Next to that is *unripe Fruit*, which yields a very sharp and stimulating Juice necessarily provoking the *Guts*, and exciting their *peri-*

staltick Motion; but what is under the former Restriction, is easily spent and discharged in the Disease it makes.

But *Food* hard to be concocted, and *Food* of ill Nourishment, corrupt in the Stomach and become very sharp, and in Course make the Contraction of the *Guts* more frequent and more violent; or such *Food* causes a *Diarrhœa* to continue for a long Time, and very obstinately; for it does not go well off the Stomach, and acts continually in the *Stomach* and *Intestins*. Of all sharp Liquors, or Substances, that pass along the *Intestins*, *Gall* is the most powerful occasion of a *Diarrhœa* continuing; for sharp *Gall* provokes the Contraction of the *Guts*, in Proportion to its Sharpness. Besides, it never is exhausted; but as the Gall is carried off by the Stools, there is a continual and fresh Supply brought into the *Duodenum*; and therefore *Gall* is a powerful and a permanent Cause of a *Diarrhœa*, and occasions it to continue with any assignable Violence, and to any assignable time, while the sick Person keeps alive. These stimulating Causes, and their Power, may sometimes be discerned by the *Mucus* and Streaks of Blood, black Excrements, and the like, voided when Men go to Stool; tho' they do not always give the Degree of the *Irritation*.

An immoderate Quantity of Excrements, voided in a Diarrhœa, denotes the Intenſneſs of the Cauſe more abſolutely than in the preceding Obſervation.

Frothy Stools ſhew a great Strength of a *Diarrhœa*; for by Chap. III. the great Quantity of Aliment is voided, when the Stools are *frothy*. And conſequently *frothy* Stools denote an obſtinate *Diarrhœa*.

Theſe are ſome of the principal Prognoſticks to be made from this Kind of a *Diarrhœa*; and the Theory already given apprizes us of the Truth of theſe Concluſions and Prognoſticks. We will next conſider after what manner theſe Particulars are declared in Books of Phyſick; for as the Facts have been conſtantly obſerved, they become fitter to be conſidered; and as they have been collected by Obſervation, ſo we may diſcern the proper Method of determining the prognoſtick Signs, in every Diſeaſe; as alſo, after what manner they may be attained.

Hippocrates tells us, [a] that *it is an ill Sign when People feel a Bitterneſs, and a bilious Griping about the Mouth of the Stomach.* And Authors obſerve, that *yellow* and *bilious* Stools, ſharp, yellow Stools, like Yolks of Eggs, and green Stools are very bad, unleſs they come critically to purge the Body.

[a] Coac. prænot.

Stools of a Saffron Colour are ſtill worſe, and if they are ruſty and green, the more they ſhew of an inward Heat. But all bilious Stools that are not critical are very bad. By theſe Accounts it is evident, how ominous bilious Stools are; but the Reaſon of their Illneſs does not appear from theſe *Aphoriſms*, tho' it plainly does from the Account I have given of a *Diarrhœa*. The reddiſh Stools, and ſuch as are like *Lees* of *Wine*, are thus repreſented by *Hippocrates* in the Caſe of *Euryanax*'s Daughter, who had a *Diarrhœa* with *bilious* Excrements, and who frequently went to Stool, with few, ſharp, thin, and pure Excrements; but when they are red, they are very dangerous; yet they are more fatal when they are black. So the ſame *Hippocrates* tells us, *that a Diarrhœa with red Stools is very ill in every Diſeaſe*. The Reaſon aſſigned by *Proſper Alpinus* is, that a Looſneſs with red Stools is very dangerous; and the more, that it proceeds from a Fault in the Liver, as in caſe of an *hepatick* Looſneſs; yet theſe are excepted when they are critical. But, by what has been ſaid in this and the foregoing Chapter, my Reader can judge of the Degree of Danger of this Kind of a *Diarrhœa*, or of a *Diarrhœa* accompanied with theſe Symptoms. The like Judgment may be made of the *green* and *leek-like* Stools; which are likewiſe pronounced

nounced to be very dangerous, becauſe they denote a more violent State of the Diſeaſe, *viz. tawny Gall* made ſo by the burning Heat of the Blood. But if we remember what is ſaid in Chap. III. and what I lately ſaid in this Chapter, we cannot be at a Loſs for making the true Prognoſtick from Stools, how eaſily, *viz.* and how difficultly a *Diarrhœa*, with theſe Stools, may be cured. Hence we may judge of this Aphoriſm of *Hippocrates* [b] *Black Stools, as is the blacker Blood, that come of themſelves, either with or without a Fever, are very dangerous.*

Theſe are the Prognoſticks to be made from *griping* Stools in a *Diarrhœa*; let us next conſider a *ſerous* and *watry Diarrhœa*, never or ſeldom accompanied with Pains, or Griping. Theſe Stools import more or leſs Danger, according to the Cauſe that produces them, and the weakly Condition of the Sick; as is very manifeſt from what has been diſcourſed in the two foregoing Chapters.

When the Strength of two ſick Perſons is the ſame, the ſerous *Diarrhœa*, produced by the too ſtrong Doſe of a purging Medicine, is nothing ſo dangerous, nor will be of ſo great a Duration, as when it is produced by the Coldneſs of Air.

[b] Lib. iv. Aphoriſm.

Cold Weather, and rainy Weather, occaſion a *ſerous Diarrhœa*, in Proportion to the Greatneſs of the Cold and the Time it laſts. But cloſe rainy Weather makes the worſt *Diarrhœa*, and the greateſt Quantity of Water among the Stools.

Old People are moſt ſubject to a *ſerous Diarrhœa*, which is not only worſe than any of the former, but becomes more violent by continuing for any time. The *Diarrhœa* following any Diſtemper is of the ſame Nature with the former, and is eaſier, or more hardly, to be cured, as the principal Diſeaſe may be conquered and removed. It is this Kind of *Diarrhœa* that is moſt commonly ſymptomatick, and is ſometimes called *Colliquative*, when it follows a *hectick* Fever, and the *Plague*, and even other Fevers that are hard to be cured, which on that Account are likewiſe called *Malignant*. But I have already treated theſe Sorts of a *Diarrhœa* ſo fully, that it is needleſs to repeat what I have made formerly ſo plain.

Now if we conſult the beſt Authors in Phyſick, eſpecially *Proſper Alpinus*, we find the Danger of ſerous and watry Stools declared; tho' they could not diſtinguiſh which Stools were moſt dangerous, becauſe they knew nothing of the Way they are produced. *Liquid Stools*, ſays *Alpinus*, *ſometimes proceed from*

from a moist Constitution, Infancy and Youth; from the moist Temperature of Air, or else from humid Aliment, or the Crudity of the Stomach; or else, as Galen *thinks, when the liquid Food is not carried from the Stomach into the Liver; or else when Moisture is brought into the Guts from the Liver and Spleen; or that the Spleen, or all the Body, is purged by the Liver. However,* Hippocrates *declares, that of all liquid Stools, the watry are much the worst; and* Galen *says, that such Stools are a great Sign of Crudity and Indigestion. That Kind of a* Diarrhœa *is always fatal, in great and bilious Diseases.*

What follows is plainly false, and founded in an obvious Error formerly shewn; *Fat Stools,* Galen *informs us, are in acute Diseases, when the Fat is carried off by the fiery Heat; but when they are viscous, they shew that the Fat is not so much melted, as that the solid Parts of the Animal are consumed, and that it is falling into a Decay; and then the Stools are fat, viscous, white, in a small Quantity, and are stinking. These are always dangerous, since it is very bad for the Parts of the Body to decay, and to be wasted in their Fat; which are Marks of a burning Heat in acute Diseases, and of certain Destruction.*

Now,

Now, though the true State of theſe Facts is already ſhewn with great Certainty, the immoderate Quantity of watry Stools has always been diſliked. *But*, ſays *Hippocrates, if Men go frequently to Stool, and from all the Parts of the Body, there is great Danger of fainting away*; or as it is elſewhere expreſſed, *A liquid Stool, voided haſtily and at once, or by Degrees, is very bad; the one occaſions Watchfulneſs, and the former Death.* All theſe Evacuations are unprofitable, ſays *Alpinus*, both becauſe they are not ſufficient to remove the Cauſe of the Diſeaſe, and that they denote the great Abundance of Humours, always fatal in a violent Diſeaſe; or elſe, that the Power of Nature is languid and ſpent, which attempts and endeavours to diſcharge the noxious and hurtful Humours, but what is not able, or ſufficient to that Purpoſe.

This is a dreadful Repreſentation of this miſerable Scene, always remedileſs, becauſe Phyſicians have no true Knowledge of the Caſe; and have only been able to ſet forth this Calamity in Allegories, and other affecting Figures of Speech. *Hippocrates*, in his firſt Seaſon of the Plague, tells us that *Abſceſſes followed theſe forementioned Symptoms*, which *Galen* renders *Stools*, and thoſe were greater than could be ſupported under, or fewer than could do any Good. The firſt Part of this Declaration

ration is commonly true; but I hope Phyſicians will not expect any Good from the laſt, whether they ſhould happen in the Diſeaſe, or that they themſelves ſhould try to make them greater.

Hippocrates ſays, in a Word, all they that were taken ill of acute Diſeaſes, chiefly miſcarried with a Looſneſs; for they all went off in a Diarrhœa. *Galen*, in his Commentary on this third Book of the Epidemicks, confirms this Affirmation of *Hippocrates* by his own Experience: And ſays, that in the Plague which laſted very long in our own Times, every Body died in a *Looſneſs*. What was voided was a Colliquation.

I have inſiſted the longer on this Subject of a watry Looſneſs, or of a *ſerous Diarrhœa*, becauſe it has always been the moſt pernicious of any, and the leaſt underſtood of them all. But what is moſt lamentable, we ſhall find hereafter very little Proviſion made for curing it; and if any Thing can raiſe our Concern higher, the Medicines in moſt common Uſe among Phyſicians are more fitted to promote, than to cure, it. But to conclude, [a] *Hippocrates* has truly informed us, that when a Looſneſs has laſted a long Time, and the Powers and Faculties have been weakned, and Men have ſtill ſtood the Shock of the Diſeaſe; yet then they fall into a *Lientery*, or

[a] Lib. vi. Aphor. xliii.

into

into a *Dropsy*, whereof they dye at last. The Truth and Reason of which Aphorism is plain in Chap. III. of this Book.

The Prognosticks I have offered are the genuine Corollaries, drawn from the Account I formerly gave of the *Nature* and *Causes* of a *Diarrhœa*; and do not only truly explain the Prognosticks of all antient Physicians, but give us likewise the truest Expectations we can have about the *Cure* of a *Diarrhœa*; yet I must own, that one material Branch in settling Prognosticks has at this Time been omitted, and that altogether by complying with the Rank and Order we find this Doctrine treated of in Books of Physick. Medicines are our Instruments we make use of for curing Diseases, and on whatever Side, of Nature, *viz.* or of the Disease they lean, they will in every great Case determine the Event to *Health*, or to *Death*. But as yet we have made no mention of Medicines, which therefore cannot at present be any Part of our Consideration.

It is very certain, that a Physician that is either provided with an excellent Medicine for curing a Disease, or who can make a better Use of the Remedies commonly recommended by Physicians, will form far different Expectations for the Cure of that Disease, than a Physician that is unprovided of such a Remedy, or that does not know any

other Choice in the common Stock, beſides their being recommended. This is a very obvious Truth, and might be illuſtrated from the Practice of the *Jeſuits-Bark* in curing Agues, and by many other Inſtances, if it were not already manifeſt, and what cannot be denied Me: And therefore in treating the Dyſentery, I will conſider its Prognoſticks, after having inquired into the Nature, Cauſes, and Cure of the Diſeaſe; at preſent I will proceed to diſcover the Medicines employed by Phyſicians for curing a *Diarrhœa*, and which of them are the beſt for that Purpoſe; as alſo, to determine which of thoſe Medicines beſt ſuit the particular *Diarrhœa*. All which Conſiderations are ſtill undetermined at this Time among Phyſicians.

CHAP. VI.

The Cures of a DIARRHOEA.

THE Cures for a *Diarrhœa* that we meet with in Books of Phyſick, are very various in their Nature, but more various in their Number; an Argument, that either Phyſicians have not hitherto

diſcovered

diſcovered a proper Method of Cure, or ſufficient Remedies for executing it. This Concluſion is the more obvious, if we conſider in what general Terms theſe Cures are recorded, and upon what ſlender Foundations the Medicines were firſt made uſe of; every Remedy comes equally and promiſcuouſly recommended to us, and our Choice is not directed, nor fixed by any particular Account of the Medicines; they are all *good*, and *experienced* by *great* Phyſicians of *long* Practice: So that any one Method is as artful as another. One Medicine is equally our Choice as another; nothing beſides our Fancy (a miſerable Guide) is left to conduct us; and the neceſſary Conſequence of our Ignorance is all the *Wrangle*, and *Conteſt*, that *Humour*, *Opinion*, and *Intereſt* can occaſion: There is nothing of a Principle Phyſicians can fix upon, whereby they may put an End to their precarious, and unſeaſonable, Diſputes.

But in all former Accounts of a *Diarrhœa*, Phyſicians have not been able to give any rational Account of the *Cure* of a *Diarrhœa*; nor to tell us, why one *Method*, or *Remedy*, is to be preferr'd to another, either in the general Practice, or for curing any particular Caſe of a *Diarrhœa* in its moſt ſimple, eſſential, or uncomplicated State. *Phyſicians* indeed knew nothing of the *Nature* of a *Diarrhœa*, and they conſidered many Sorts of it

that

that prove altogether imaginary, and that are truly falſe by the foregoing Account of a *Diarrhœa*. Matters grew ſtill more impracticable, as a *Diarrhœa* might be complicated with other Diſeaſes, or attended them as Symptoms; then indeed we find it impoſſible for Phyſicians to direct us in the particular Care that ought to be had, when we regard that Symptom in every Diſeaſe, and under every Circumſtance of Diſeaſes wherein a *Diarrhœa* may occur. For that Reaſon it is, that *we* find the Practice of Phyſicians differs nothing in a *Diarrhœa*, when it is a *Symptom*, from what it is when a *Diarrhœa* is the principal and ideopathick Diſeaſe.

That, then, the Cures, at leaſt of an *eſſential Diarrhœa*, may hereafter proceed upon better Grounds, and in a more reaſonable Manner, and that a *Diarrhœa*, on that Account, may be cured both with greater Certainty and Succeſs; it is very manifeſt that *Indications* for curing a *Diarrhœa*, are ſo many *Corollaries* to be drawn from the foregoing Account, given of the *Nature* of a *Diarrhœa*. Is not every *Diarrhœa*, whether *eſſential*, or *ſymptomatick*, produced univerſally by *ſtimulating* the *Guts*, or by an extraordinary Diſcharge of a *ſerous* and *watry Liquor* into them? Does not therefore the *Cure* of a *Diarrhœa* altogether conſiſt in removing the ſtimulating Cauſes aſ-

ſigned, and by preventing the *ſerous Humour* from flowing into the Guts? and therefore every Method, and every Medicine, propoſed and offered for the *Cure* of a *Diarrhœa*, muſt bring about one or both of theſe Deſigns, or they will prove altogether ineffectual in the Cure: And no Medicine will ever ſucceed, but in that Proportion it can remove the Stimulus, or drive the watry Liquor into its natural Channels; and the Medicines muſt be properly applied to the *Stimulus*, or *ſerous* Liquor, accordingly as they are the *Cauſe* of the *Diarrhœa*, which is to be cured.

The Courſe then of our Method leads us, in the next Place, to receive the *Methods* of *Cure* Phyſicians have already gone upon and recommended to our Practice; which afterwards we will examine by the Rule we have now fixed and eſtabliſhed.

Hippocrates informs us, [a] *that every Change in a Looſneſs is profitable, if it is not for the worſe.*

The forementioned Phyſician obſerves, [b] *that the Stools abate, when the Quantity of Urine encreaſes in the Night.*

Hippocrates likewiſe aſſures us, [c] *that a Vomiting happening to one ill of a* Diarrhœa, *carries off the Diſtemper.* But this and the

[a] Aphor. xiv. Sect. ii. [b] Aphor. lxxxiii. Sect. iv.
[c] Aphor. xv. Sect. vi.

former

former *Aphoriſms* are boldly attacked by [a] *Cælius Aurelianus*, with what reaſon will hereafter appear.

The Method for curing a *Looſneſs* propoſed by [b] *Cornelius Celſus*, the moſt elegant and excellent *Roman* Phyſician, is to begin with a *Vomit*: Next Day, and in the Evening, the Sick is to be anointed in a warm Place; they muſt eat moderately, and drink ſome ſtrong rough Wine; there muſt a Cere-cloth with Rue be laid on their Belly. There is no need of *walking* or *rubbing* in this Diſtemper. It is uſeful to ride in a *Coach*, but ſtill more to get a *Horſe-back*; becauſe nothing *ſtrengthens* the *Bowels* more than *riding*.

But the great Example the *Latin Hippocrates* always propoſes to himſelf, makes ſome Exceptions to this Rule of *Exerciſe*. For *Hippocrates* directs [c], that they who are ſeized with a *Looſneſs* while they are *exerciſing*, and *void unconcocted Excrements*, reſembling their Food, muſt at leaſt leſſen a *third* of their *Exerciſe*, and one half of their *Food*.

Coition is recommended for a ſovereign Remedy, and *Hippocrates*'s Authority made uſe of by [d] *Aetius*, [e] *Paulus Egineta*, and [f] *Amatus Luſitanus*; yet it will quickly ap-

[a] Cap. iii. de Cæliacis, pag. 521, 522. [b] Lib. iv. cap. xix. [c] De Salubri vict. Rat. pag. 339. Fœſ. [d] Tetrabib. 1. Serm. iii. cap. viii. [e] Lib. i. cap. xxxv. [f] Lib. i. Cent. xiii. Obſ. xi.

pear that *Hippocrates* was altogether of another Opinion, and that their *Aſſertion* is contrary to *Reaſon* and *Experience*.

Aſtringent Medicines are found in the greateſt Abundance, and are chiefly depended on by Phyſicians, for curing a *Looſneſs*. But many modern Phyſicians complain of their unhappy Succeſs by binding Medicines; their Patients ſuffering much more by ſome Cures in that Way, than they had formerly done by the Diſeaſe. In antient Times *Galen* blamed *Herodotus* and *Dioſcorides* for aſſerting, that [a] there was not any Remedy could cure a *Diarrhœa* or a *Dyſentery* but *aſtringent Medicines*.

Opium and opiate Medicines have been often made uſe of for curing a *Diarrhœa*.

Bleeding is eſteemed of great Uſe for curing a *Diarrhœa* by [b] *Leon. Botallus*. This Opinion is ſupported by [c] *Zacut. Luſit.* who ſays, that a young Man was cured of a *bilious Diarrhœa* by being *bled* at the *Salvatella*.

Bathing has often been practiſed with good Succeſs in the Cure of a Looſneſs.

After this Account it muſt prove our Admiration, that a Diſeaſe ſhould ſtand out againſt ſo many Methods of curing, and ſhould prove fatal ſo commonly, while we pretend

[a] De ſimpl. Medicamentor. Facult. lib. pag. 28. Cap. xxxvi.
[b] Cap. iv. de Curat. per Sang. Miſſ. [c] De Med. pr. lib. 2. Hiſt. lxxxi.

to

to ſo great a Number of ſovereign Cures. Nothing more than our not underſtanding the Ways how a Looſneſs is produced, is the Cauſe of the ill Succeſs of Phyſicians. But as the *Nature* of a *Looſneſs* has been laid open and made manifeſt, ſo the ſhewing the Propriety of the foregoing *Methods*, and for what *Looſneſs*, or in what Time of a *Looſneſs* they are particularly uſeful, will render the Succeſs of Phyſicians more fixed and frequent, which was the next Thing I propoſed to do.

But before I proceed to this Inquiry, I will ſet forth our preſent Defects in the Senſe of an excellent Practitioner, *Laz. Riverius*, who, after *Sennertus*, has collected the beſt Accounts of antient Phyſicians, and with the greateſt Judgment; inſomuch, that all Phyſicians ſince their Time have then only ſpoke beſt, when they ſpoke the Language of the Antients, but give very imperfect Accounts, as often as they have ſwerved from them; whether this Defect proceeds from Conceit, or that Phyſicians not duly ſtudy the Books of their Predeceſſors.

The *Cure* of a *Diarrhœa*, ſays *River.* (whether that depends on another Diſeaſe, or not) cannot otherwiſe be attempted than by *mild*, *diluting*, and *cool Purges*, *narcotick more particularly*, *and cooling Medicines*, *when the* Diarrhœa *ſubſiſts by Gall*, *and o-*

ther ſharp Humours, bleeding in the mean Time, and that repeated. A Clyſter is to be given, in the Beginning, once or twice every Day.

But while the Remedies are adminiſtred in their Turns, we muſt purge (as there is occaſion) though the *Diarrhœa* is very great, becauſe it has been found, that a *Diarrhœa* has ceaſed, after its Cauſe has been evacuated, and carried off.

A *ſtercorous Diarrhœa* does not continue; but if it ſhould, the mentioned Remedies are proper and uſeful, having firſt made uſe of the general Adminiſtrations of purging, *&c.*

A *Colliquative Diarrhœa* rarely admits of a Cure; yet it may be helped by *ſtrengthning* and *reſtorative* Medicines after gentle Purging and lenient Clyſters.

We have, in this Account of the learned *Riverius*, the whole Practice of a *Diarrhœa* brought down through all the Ages of Phyſick; which account not only comprehends all antient Experience, but far exceeds the Hiſtories of Cures given us by modern Phyſicians. But however perfect this Account is in point of Hiſtory, and that it inſtructs a Phyſician, and enables him to purſue a more ſteady Practice than the Rules we find among more modern Phyſicians; yet the foregoing Account, I have given of the *Nature*, and *Cauſes*, of a *Diarrhœa*, cannot fail to apprize

prize us of the Defectiveneſs of theſe Methods, which neither inſtruct us why any of them is moſt proper; when we ought to practice in one Method preferably to another; and how long we ought to perſevere in the Method we, at firſt, ſet out with.

The great Candour and Integrity of this excellent Phyſician is equally laudable and conſpicuous; for he tells us of the Difficulties which occur in curing a *ſtercorous Diarrhœa*; and profeſſes that he never found that which is *Colliquative* ever admitted of any Cure. On the other Hand, moſt of the modern Phyſicians are either not apprized of theſe Difficulties, or they conceal their ill Succeſs, which cannot be mended, while they practiſe with the ſame Medicines, and are not better apprized of adminiſtring them more properly than antient Phyſicians. Doctor *Pitcairn* not only confounds the *Diarrhœa* with the *Lientery* and *cœliack Affection*; but he likewiſe aſſerts, that they may all of them be cured the ſame Way. I do not wonder at the laſt Part of his Aſſertion, becauſe I have formerly ſhewn, that the Practice of the Ancients is the ſame in theſe Diſeaſes, but that it ought not to have been the ſame, by the Account they give of the *Diarrhœa*, and the *Lientery*, which are very different Diſeaſes, and required a very different Method of curing them. But when Doctor *Pitcairn* reckons thoſe

three different Diſeaſes one, he not only contradicts *Riverius*, whom he follows, and is the ancienteſt Phyſician he ever read; but even oppoſes his own Deſcriptions of theſe Diſeaſes, which he chiefly takes from *Lazar. Riverius*. The Doctor, too, is ſo far from owning the Difficulty of curing a *Colliquative Diarrhœa*, that he partly thinks there is not any ſuch, or that it may be cured by the common Means; which, we find, is againſt all Experience.

But as the Account I have given of a *Diarrhœa* has made us ſenſible of the Defects of former Practices; ſo it ſhall be my next Endeavour, to diſcover the peculiar Ways of acting of the Medicines, that anſwer the forementioned Methods, whereby we ſhall be inſtructed, when one *Method*, or even any one *Medicine*, is moſt properly adminiſtred, and why it muſt be continued, or laid aſide; which is the Sum and Subſtance of Phyſick. Beſides, we may now learn, wherein the Difficulty of curing a *Colliquative Looſneſs* conſiſts, and what muſt be the propereſt Means of curing it; which is a mighty *Deſideratum* in Phyſick. Dr. *Pitcairn* is under a groſs Miſtake, when he ſays, a *Fever* and its *Diarrhœa* require the ſame Cure, becauſe they have one common Cauſe: But he did not underſtand the Time and Circumſtance of the *Fever*, when a *Diarrhœa* begins to ſhew

it

it ſelf, and which occaſions its continuing; and is, on that Account, not apprized of the Method of curing either one or the other of them. In this Senſe their Cauſe is not common, but the *Fever* is truly and properly the Cauſe of the *Diarrhœa*. Other Phyſicians do not ſeem to be ſenſible of theſe Difficulties; and therefore, that we may be better informed, we proceed next on ſuch Inquiries.

SECT. I.

How far Purging and Vomiting contribute to the Cure of every DIARRHOEA.

I Do not intend to inſiſt upon the firſt *Aphoriſm* I bring from *Hippocrates*, that importing nothing particular in the Cure of a *Diarrhœa*, becauſe a Change in every Diſeaſe, that is not for the worſe, is always profitable, and ſignifies that there is a Stand put to its Violence; I proceed, in the next Place, to conſider the Advantages that accrue by *vomiting* and *purging* in the *Cure* of a *Diarrhœa*.

The great Benefit of vomiting is firſt eſtabliſhed in the fore-mentioned *Aphoriſm*, that *Vomiting coming upon a long Looſneſs is often its Cure.* And therefore *Hippocrates*, in [a] another Place of his Works, adviſes his Followers, *that they would not ſtop a vomiting, when at any time they are deſired to cure one of a* Diarrhœa, *who likewiſe vomits; for the vomiting eaſes the purging: But the vomiting will be ſtayed more eaſily afterwards. And if the ſick Perſon is very weak, give him a ſleeping Draught after his vomiting.* *Hippocrates* is ſo ſatisfied with the Succeſs that attends this Method of Nature, that he thinks we ought always to give a *Vomit* when we would *cure* a *Looſneſs*; as he did in the [b] Caſe of *Meneſianax*, to whom he gave *Hellebor.* This Practice may be particularly found when we ſee the Method of this excellent Phyſician. [c] *A Diarrhœa was common and violent, and the like happened in the Winter. They were bled; Hellebor was adminiſtred; they drank Cow's Milk, and firſt Aſſe's Milk, which was uſeful, and cured the Looſneſs.*

Hence it is plain, that, in Fact, *vomiting* is the Cure of a Diarrhœa; as alſo that a Diarrhœa is actually cured by *vomiting* and

[a] Lib. de loc. in Homine. pag. 416. [b] Lib. de Acutis.
[c] Lib. 7. Epid. pag. 1008.

purging Medicines. The Reaſon of this Experience is likewiſe manifeſt from what has been ſhewn about the *Nature* and *Cauſes* of a Diarrhœa; becauſe a *Diarrhœa* is often occaſioned by ſharp and *ſtimulating Aliment* in the *Stomach* and *Inteſtins*; and its Cauſes are *unripe* Fruit, *indigeſted* Food, *&c.* And therefore *vomiting*, and *vomiting* and *purging* Medicines, bring up, or carry downwards, the ſharp Subſtances, in which conſiſts the *Nature* of one Kind of a *Diarrhœa*; and, on that Account, are the *Cure* of a *Diarrhœa*: For the *Cauſe* of a *Diarrhœa* being removed, the *Diarrhœa*, the Effect of thoſe Cauſes, quickly ceaſes.

However true this Reaſoning is, yet the promiſcuous Uſe of *purging* and *vomiting* Medicines do not anſwer our Expectation; but eſpecially, if their *Doſes* are not wiſely determined. Nay moreover, *vomiting* and *purging* Medicines are a Remedy only for that Kind of a *Diarrhœa* which has its Origin from *ſtimulating* Cauſes. But when the *Diarrhœa* proceeds from *purging*, or *vomiting* Medicines, from *old Age*, or when a Man is in the State of old Age by any Diſeaſe; in that Caſe *vomiting* and *purging* Medicines are ſo far from being the *Cure* of a *Diarrhœa*, that they are pernicious to Men, and become a Poiſon in ſome Degree. How commonly do we find a Mul-

titude of Lives carried off by purging Medicines, while Physicians, under specious and plausible Pretences, think they are *carrying off a* Diarrhœa? But the Reason of this pernicious Success is very obvious, if we consider what has been said of a *Symptomatick* and *Colliquative* Diarrhœa.

Cælius Aurelianus, the learned *Numidian* Physician, was so sensible of the fatal Consequences of this *purging* Practice, without Distinction, that he thinks, against all Reason and Experience, these Medicines can never be beneficial in *curing* a *Diarrhœa*; and very rashly blames the great *Hippocrates* for recommending them. But we find both their Experiences are true; and that a *Diarrhœa* of one Sort will be cured by *vomiting* and *purging* Medicines; while these very Medicines are pernicious in another Species of a *Diarrhœa*. These different States of a *Diarrhœa* have been distinguished in the foregoing Discourse; yet I will quote a Passage or two from *Aurelianus*, that his Assertion may not be pretended to be feigned, and alledged as a Falsity, to Readers that may never have had an Opportunity of knowing it true in this Author himself. *Even they*, says *Cælius*, *who first brought Physick into Form are blamable*; *for* Hippocrates *ordered the Sick to be treated with Hellebor in the Beginning, preferring it to every other Remedy.*

And

And afterwards, the forementioned Practice of *Hippocrates* is condemned in reproving *Liſius*, or *Luſius* who followed him in it, and who *commends vomiting after Meat.* This *Liſius ordered the Sick to be* purged *every three or four Days, if the Looſneſs continued, and had laſted for any conſiderable Time, or ſeemed to have any Type by its periodical Returns.* This Practice *Aurelianus* diſlikes, becauſe he alledges this Method is unſeaſonable and improper; as alſo that it is too violent, and very like to turn a ſafe *chronical* Diſtemper into one that is *acute* and dangerous.

It being then obvious, that the Truth of both their Facts and Experiences are indiſputable; it is as obvious, that neither of them underſtood the *Times* and *Circumſtances* of a *Diarrhœa*, when either of the mentioned Methods were the moſt proper. *Galen* alledges, that *vomiting* cures a *Diarrhœa* by making a *Revulſion* of the Humours to which it is owing, which, in the beſt Senſe, is ſcarcely explicable; and is abſolutely falſe in the Caſe of a *ſerous* and *ſymptomatick Diarrhœa.* But we having now, by the foregoing Theory, a ſenſible Notion of a Vomit, or of a Purge, curing a *Diarrhœa, viz.* that they can only cure it when its *irritating* Cauſes ſubſiſt in the *Stomach* and *Inteſtins*, and that then the Doſes of theſe Medicines

dicines muſt be adjuſted to the particular Caſe of every Perſon; becauſe a ſick Perſon vomiting, or going to Stool, a determined Number of times in one Day, is under the Circumſtances of one that has taken a Doſe of theſe Medicines, ſufficient to produce the like Effects. And therefore, the ſuperadded Doſe, which is to carry off this Quantity of Stimulus, muſt be adjuſted to that End, and the Strength of the Perſon: But inſtead of deſcending into theſe Particulars, I will add the Medicines that have been recommended by the beſt Phyſicians for curing a *Diarrhœa* by *purging*, *vomiting*, or by doing both at the ſame time.

It has been already obſerved that *Hippocrates* gave a Vomit of *Hellebor* for curing a *Diarrhœa*; which Practice of vomiting has ever been continued, tho' with leſs violent Medicines in all after Ages. *Angelus Sala* provided the Phyſicians in the Beginning of the ſeventeenth Century with his Salt of *Vitriol*, which is ſtill a moſt gentle Vomit, and was an Excellent Remedy for the Cure of every *Looſneſs*, till *Helvetius* eſtabliſhed the Practice of the *Ipecacuanha-root*; but then the *Salt* of *Vitriol* gave way to the laſt, which is more agreeable, and is reputed more beneficial for the Cure of a *Looſneſs*.

Great are the Commendations of the Salt of

of Vitriol, though it has much fallen into Diſuſe for the laſt thirty Years. [a] *Lazarus Riverius*, an excellent Author, tells us of a great Cure made of a young Man who was deſperately ill of a Bloody-flux, and being ſent into the Hoſpital was recovered with *Sal. Vitrioli* ʒj diſſolved only in fair Water. He vomited up a great Quantity of *bilious* Stuff, and was immediately cured.

Tho' we cannot produce any Hiſtory of a Cure by *Ipecacuanha* that is either more effectual, or more ſudden, than that I have juſt now mentioned; yet the *Salt* of *Vitriol* gave way to the *Ipecacuanha*, either becauſe it was a latter Invention, or that it was more agreeable, and was for a long time kept a great Secret. It is true, that *Piſo* had long ago deſcribed the *Ipecacuanha*, and told us, that it cured a *Dyſentery* or *Bloody-flux*; and [b] *Georg. Macgravius* had likewiſe informed us, that the *Ipecacuanha* cured a *Looſneſs*; but it muſt be confeſſed, that he was little acquainted with its Operation; for he ſays, it always purges, and ſometimes vomits; whereas it always vomits, and is given commonly for that End only; and ſometimes only purges. So that, unleſs *Helvetius* had eſtabliſhed its uſe, we might have been ſtill in the dark for knowing its true

[a] Cent. Obſ. tertia, Obſ. 9. [b] Hiſt. Braſil. p. 17.

Operation,

Operation, or the Manner how it cures a *Looſneſs*.

The learned Doctor [a] *Tournefort*, an excellent Botaniſt, has given the World the moſt particular Account of its Effects, and of the Manner of adminiſtring it. The laſt, as he informs us, is after this Manner.

℞ *Pulver. radic. Ipecacuanhæ* ʒß. *pane involvatur ut deglutiri poſſit, hauriendo poſtea juris Carnium, vel Aquæ communis tepidæ Cyathum.*

He tells us, that it is a Vomit, and by bringing up a copious Quantity of morbifick Matter the ſick Perſon is ſpeedily cured. This he informs us of from his own Experience in *Spain*, in *Narbon*, and at *Paris* in *France*. He tells us, moreover, that by an Order from the firſt Miniſter he went into *Spain* and purchaſed a great Quantity of *Ipecacuanha* for the *King*'s Service; and that, by the like Order, he had diſtributed one hundred Weight of it among the Hoſpitals for the Relief of the Army.

But to return to the Effects and Operation of *Ipecacuanha*; Monſ. *Tournefort* illuſtrates both in one moſt notable Hiſtory of his Maſter, *Petrus Sylvanus*, who was reduced to

[a] Mater. Med. p. 190. *Londini*.

the

the greateſt Weakneſs, but was cured by *Ipecacuanha*. He took the Medicine in the Morning, without taking Place upon him, notwithſtanding of all Endeavours to make him vomit; and in all that time his Diſeaſe continued in its ordinary Violence: At length he voided ſix Pints of thin, ſerous and bloody Excrements, and then found Relief.

This Account and Experience of Dr. *Tournefort* is a manifeſt Proof of the *Ipecacuanha* being a Remedy that cures a *Looſneſs* by its vomiting and purging Faculty. How miſerably then are they miſtaken, who believe that it is ſome Specifick, and that it is ſome unaccountable ſpecifick Quality of that Root that cures a Looſneſs? It is never known to have any Succeſs but when it vomits, or purges the Sick; which *Hellebor*, and *Salt* of *Vitriol* performing, it cures a *Looſneſs* as manifeſtly by being a *Vomit*, as either of the other Medicines.

On the other Hand, in the dangerous Sorts of a *Looſneſs* that do not want purging and vomiting, nay, where Purges and Vomits are hurtful, the *Ipecacuanha* has as ill Effects as any of the reſt. This might be ſhewn from great Multitudes of Facts, where this empyrical Practice has often been the Ruin of the Sick, or have run them into the greateſt Extremity of Danger of their Life. But it will be more agreeable to ſet forth this

Truth, from an Account of the Fate of *Ipecacuanha* in *France*, where it ſoon loſt its high Eſteem, becauſe it was found to be uſeleſs in the moſt conſiderable Kinds of a Looſneſs; for which it was more particularly wanted, and which put the *King* of *France* to ſo vaſt an Expence to purchaſe it.

I obſerved very lately, that Dr. *Tournefort* not only purchaſed the *Ipecacuanha* in *Spain*, but that he likewiſe, by Order of the firſt Miniſter in *France*, had diſtributed one hundred Weight of it among the Hoſpitals for the uſe of the Army; ſo great Care was taken to ſupport the Army againſt a *Diarrhœa*, the greateſt Enemy Armies have commonly to encounter. This expenſive Proviſion did not anſwer all the Trouble and Charge of a Prince greedy of Conqueſt; for the ſame Dr. *Tournefort* informs us, that the *Ipecacuanha* had no ſuch Effects in a Camp as it had had in private Families about *Paris*. The Reaſon is very obvious from what has already been ſhewn; for they only are cured who bring up *indigeſted* or *bilious* Stuff; but it very ſeldom cures in any other Caſe and Circumſtance, and then only as another *Vomit*. The Reaſons aſſigned by Dr. *Tournefort* are not altogether ſo plain. *The Soldiers*, ſays he, *are much weakned by the Diſtemper; their Bowels are much hurt; nor do they bear a Vomit.* Now tho' the Reaſons

Reaſons cannot be admitted, yet he gives us ſome Facts whereby we may know, when it is not proper to give a *Vomit*. Few People can be weaker than *Petrus Sylvanus*; ſo his Caſe is not of the ſame Nature with a *Camp-Looſneſs*. The Soldiers do not bear it, becauſe it gives them a greater Looſneſs, and carries them off, as it does many among our ſelves; and conſequently it is a Medicine the Army will not away with.

This ill Succeſs occaſioned our being eaſily provided with a very good *Vomit*; for the *French King* would not be a Loſer, but obliged the *Apothecaries* to take off his uſeleſs *Cargo*, which they ſold, for ſome time, at a *Piſtole* a Doſe.

What has been ſaid of *vomiting* Medicines, explains fully what *purging* Medicines do in curing a *Diarrhœa*. *Purging* Medicines have already been admitted for one Cauſe of a Diarrhœa; which Medicines cannot be ſuppoſed ever to prove the Cure of a *Diarrhœa*, in that Circumſtance they produce it. And therefore *purging* Medicines are always pernicious in a *Diarrhœa* from *old Age*, and in a *ſymptomatick Diarrhœa*; however generally they have been recommended promiſcuouſly for the Cure of every *Diarrhœa*. On the other Hand, a *Diarrhœa* produced by ſtimulating Cauſes may be cured properly, by *purging* Medicines;

becauſe *purging* Medicines do truly carry off the Diſeaſe by their purging off the ſharp Excrements, which are the Cauſe of it. Not then to inſiſt longer on a further Account of *purging* Medicines for curing a *Diarrhœa*, I will rather relate ſome of the beſt Forms of that Kind, that may be found among Authors in Phyſick that have been moſt eſteemed.

The purging Medicines are either *ſimple*, or Medicines *compounded* of the former. The firſt are *Pale-Roſes*, *Mirobolans*, and *Tamarinds*; yet *Foreſtus* queſtions their Safety. *Rhubarb* is generally recommended; but needleſs, tho' warm, Diſputes have been maintained about giving it *raw* or *roaſted*; which Controverſy is eaſily determined by the foregoing Account of things: For could *Rhubarb* be diveſted of its Purging by toaſting, it ſhould then become uſeleſs. The only Skill then in giving it and other Purges, conſiſts in giving them in their true Doſe. *Agarick*, likewiſe *Mechoacanna*, have a great Place among *purging* Medicines that have cured a *Diarrhœa*.

Authors commend this purging Draught.

℞ *Tamarindor.* ʒjß *Mirobolan. citrin.* ʒij. *Decoquant. in Dec. Hordei Aq. plantagin ā.* q. ſ. *ad* ʒviij. *Liquor fervidus verſetur ſuper rad. Rhab. electi* ʒj. *infund. clauſa per noctem, & mane Colaturæ*

turæ adde Syrupi Roſar. ſolutiv. ℥j. M. F. *Potio.*

℞ *Pulver. radic. Rhab. electi* ʒß. *Pulpæ Tamarind.* q. ſ. *ut* F. *Bolus Mane deglutiendus.*

Fr. Joel recommends this *Bolus.* ℞ *Pulp. Caſſiæ recenter evulſæ* ʒx. *Sacch. conſpergatur ut Aurorâ deglut.*

Rhubarb, no doubt, is to be preferr'd to the other purging Medicines, becauſe it is likewiſe endued with a binding Quality, whereby it leaves every one bound that takes it in Health, and muſt therefore have ſome ſuch Effect in a *Diarrhœa.* This its binding Quality is ſo notable, that with it may be made *Ink,* if it is to ſtand in the Place of *Nut-Galls,* in any ſuch Compoſition.

Beſides theſe purging Medicines, Phyſicians have recommended *purging Clyſters,* and ſometimes *Clyſters* that do not *purge* nor *bind*; which therefore they call *Clyſteres Macri,* or *Maigre* Clyſters. Both theſe Sorts of Clyſters are of excellent Uſe, when either the Sick are ſo weak that they cannot bear any purging Medicine of another Sort, or, that their weakly Condition calls for a more ſpeedy Preparative, and cannot wait the Loſs of ten or twelve Hours before they begin the moſt uſeful Part of

their Cure. And therefore I will give ſome Forms of theſe Kinds of Clyſters.

℞ *Decocti Hord.* ℔j. *Ol. Roſar.* ℥ij. *Sacchari crudi, quod rubeum vocant* ʒj. *vitell. Ovor.* N°. ij. *Commiſceantur. F. Enema.*

When the *Looſneſs* is ſo great, that it is not fit to give any *purging* Medicine, then the *Maigre* Clyſters are of the greateſt Advantage to the Sick. This Clyſter I commonly order on ſuch Occaſions.

℞ *Baccar. junip. contuſar.* ℥jß. *fl. Chamemæl.* ʒvj. *Bulliant in Aq. commun.* ℥xij. *ad* ℥vj. *vel* vij. *Colaturæ adde Ovi vitelli dimidium, Ol. junip. ſtillatitii* ʒj. *Optime miſceantur & F. Clyſter.*

I forbear to trouble my Reader with more Forms of theſe Medicines, becauſe great Plenty of them may be found in every Book of Phyſick.

SECT.

SECT. II.

The use of Diuretick *Medicines in the Cure of a* DIARRHOEA.

THE Practice of *Diuretick* Medicines in the *Cure* of a *Diarrhœa* is as ancient as the Practice of *purging* and *vomiting* Medicines, which I have already explained, and the Propriety whereof I then determined. All these Medicines have been administred by *Hippocrates*, tho' not with equal Success. *Hippocrates* observed, *that the Stools abated, when the Sick made a greater Quantity of Water in the Night*; which Observation holds true to this Day, and must be so for ever; because it is in the Nature of the thing to be so; as has formerly been shewn. For the Liquidity of the Stools is as the Quantity of serous Parts discharged at the Glands of the Guts; but a due Quantity, or a greater Quantity, of Urine being now voided, denotes a greater Secretion of Serum to be made at the Kidneys, and the Secretion at that Part being greater, the Secretion of Serum at the Glands of the Intestins must be less. Now the Secretion of Serum into the Guts being less,

the Stools will be leſs liquid, or more natural and conſiſtent; or the *Diarrhœa* which exiſts in liquid Stools, has abated, and that to every Degree, according to the Conſiſtence they acquire; and thus appears the Truth of the Aphoriſm.

We muſt inquire in the next Place, Whether the Practice of *diuretick* Medicines will cure a *Diarrhœa*, under any of its Circumſtances, as we formerly found *purging* and *vomiting* Medicines did. It is plain then, that the *ſerous* or *watry* Looſneſs is the Sort that ſhould be cured by *diuretick* Medicines; for the Quantity of *Serum* voided in a *Diarrhœa*, from the greateſt Irritation, is moſt inconſiderable. If then a *diuretick* Medicine could bring a greater Quantity of Water to be diſcharged in the Kidneys, it muſt prove a very uſeful Remedy in the Cure of a *watry Diarrhœa*, which is the hardeſt to be cured of any: But Experience vouches very little for the Efficacy of theſe Medicines, and our Reaſon affords us ſmall Expectations from that Practice: For it has been proved formerly, that a *watry Looſneſs* is occaſioned by *old Age*, or when Men become in the like State by being worn out by a Diſeaſe, and when their inſenſible *Tranſpiration* is become very defective; and therefore *diuretick* Medicines, which always leſſen Tranſpiration, can never become the Cure of a *Diarrhœa*.

arrhœa. Beſides, many *Diureticks* actually purge by their ſtimulating, eſpecially they that are *ſaline* and *acid*; and conſequently *Diureticks* are very pernicious in every Looſneſs.

Phyſicians are ſubject to many fallacious Inferences from ſuch plauſible Obſervations, and the Practices built on them are often very hurtful. Every Man, that goes to Stool once a Day, falling ſick, and at the ſame time being coſtive, immediately concludes, that the *Coſtiveneſs* is the Cauſe of his Diſtemper, and that a Purge will certainly cure him. Every Phyſician finding his Patient ill of a *Fever*, and going oftner or more ſeldom to Stool, very readily concludes this *Looſneſs*, or Coſtiveneſs of the Sick, to be the *Cauſe* of the *Fever*. But the Fallacy in all that Reaſoning generally conſiſts in this, that the *Diſeaſe* and its *Symptoms* have one and the ſame common Cauſe, and that neither of them require an oppoſite, or contraindicating Way of curing. How frequently do we obſerve many Women hurled into their Graves by this Kind of Fallacy? Every Woman, almoſt, has monthly Diſcharges, which continue to return orderly while ſhe continues in Health; but in many Caſes theſe Evacuations ceaſe, and the *Women* and their *Midwives* aſſign this ſtopping as the Cauſe of every Diſeaſe that can happen at

the ſame time: Yet by procuring a *Cure* by forcing this *Evacuation*, they, often, infallibly compaſs their Death, without being able to force their intended Evacuation. So difficult it is to diſcover a *Diſeaſe* and its *Symptom*, and the *Cauſes* of both.

Cælius Aurelianus not only corrects *Diocles* for recommending *diuretick* Medicines for curing a *Diarrhœa*, and his falſe Philoſophy of drying it up, and the whole Body thereby, but he alledges moreover, that a *Diarrhœa* was never known to be cured by Remedies of that Sort; and that it is well known, that the *Bladder* has been afflicted with many Diſeaſes by the uſe of *Diureticks*.

The proper Conſequence to be drawn from this excellent Obſervation of *Hippocrates* is, that ſick People begin to be in a better Condition, and begin to recover of a *Diarrhœa*, when they make a greater Quantity of Water than they had done in any time of their Sickneſs: But their *Water* is never to be brought back on theſe Occaſions by a *diuretick* Medicine; nor is the greater Quantity of *Urine* the *Cauſe*, but an *Effect* only, of the *Cure*.

SECT.

SECT. III.

How far aſtringent Medicines cure a DIARRHOEA; *with ſome of the beſt Forms of Aſtringents.*

Aſtringent Medicines are the common and laſt Reſort of Phyſicians for the Cure of every Evacuation, but more eſpecially for the Cure of every *Looſneſs*; both as they promiſe to reſtrain every extraordinary Diſcharge, as alſo, that Phyſicians believed the general *Cauſe* of a *Looſneſs* to be a præternatural *Slipperineſs* of the *Guts*, which *aſtringent* Medicines might take off, and render the Guts harder, more rough, and leſs ſlippery. But as this *Smoothneſs* and *Slipperineſs* of the *Guts* has not been found among the *Cauſes* of a *Diarrhœa*, and that the Notion is it ſelf falſe and uſeleſs, we muſt inquire further, about the proper Action of *aſtringent* Medicines when they conduce to the Cure of a *Diarrhœa*; which Action is the more particularly neceſſary to be known, that *aſtringent* Medicines have been found to have done great Miſchief on ſome Occaſions, when they were made uſe of for the curing a *Diarrhœa*.

The

The moſt ſenſible Effects of *aſtringent* Medicines are the ſtopping an exorbitant Effuſion of any Liquor. Their *Operation* then, is either the thickning the common Maſs of Liquors in general, whereby the Quantity of their Efflux is leſſened, or elſe they affect the diſcharging Liquors immediately at the Place of their Efflux; and thus prove a Bar to their further Diſcharge. And therefore, by comparing this Operation of aſtringent Medicines in the *Caſes* of a *Looſneſs*, we become eaſily apprized of the proper uſe of *aſtringent* Medicines, and alſo in what Caſes they are moſt improper, and to be avoided, on that Account.

Now as a *Diarrhœa* is moſt commonly produced by a *ſtimulating* Subſtance in the *Guts*, or by a greater Secretion of watry Parts into them, it is very manifeſt, that *aſtringent* Medicines are altogether uſeleſs, and often hurtful, in the laſt Caſe; becauſe they keep up, and are the *Cauſe* of, a *Diarrhœa*, of this Kind, by thickning the Blood, or the Maſs of Liquors in general, which is the *Cauſe* of a *Diarrhœa* from *old Age*, and when it is the Follower of any other Diſeaſe. On the other Hand, *aſtringent* Medicines being applied to the Excretory Ducts of the *Guts*, may check the ſmall Quantity of ſerous Parts that are diſcharged there by the common *Stimulus* of the *Diarrhœa*, and thus

thus may thicken the Stools, and put a Stop to the Diarrhœa; or, in that Senſe, are the Cure of a *Diarrhœa*. Beſides, *aſtringent* Medicines will, in ſome Meaſure, blunt the ſtimulating Parts, and thus prevent the *Contraction* of the *Guts* that was violent. And therefore, as *aſtringent* Medicines both *blunt* the ſtimulating Parts, and *thicken* the Stools, ſo they *ſtop* a *Diarrhœa*, and prove the Cure of it; as we find in Experience.

It will appear a very great Paradox, no doubt, to many, that *aſtringent* Medicines ſhould, on any Account, excite a *Diarrhœa*; yet nothing is more conſonant both in Reaſon and Experience. I will content my ſelf with one Inſtance of this Kind in the Caſe of the *Scurvy*, mentioned among the excellent Obſervations of a commended Author, *Eugalenus*. [a] *I have known*, ſays he, *many proceeding in this Method of Cure* (by Aſtringents) *that could not ſucceed; but after a long time their Sick either became dropſical, died ſuddenly, or died in a Conſumption.* Many ſuch Caſes might be brought from Authors of the beſt Credit, and that well deſerve our Belief; but by theſe Examples it is plain, that *Aſtringents* are altogether inſufficient, and ineffectual in theſe Caſes, however much they have been depended

[a] Pag. 416. Lib. de Scorbuto.

upon for a Cure by the generality of Authors, but againſt all Reaſon.

Aſtringent Medicines moſt commonly put a ſtop to a *Diarrhœa* produced by ſtimulating the Guts, but it has been often obſerved that greater and more dangerous Diſeaſes, than a *Diarrhœa*, have enſued ſuch Cures. This improper Uſe of *aſtringent* Medicines is ſtill unavoidable, when Phyſicians do not know the *Cauſes*, or the *Nature*, of a *Diarrhœa*; whereas all theſe Difficulties are eaſily ſurmounted by the foregoing Accounts. Is a *Diarrhœa* the *Criſis* of another Diſeaſe; or is that Diſeaſe carrying off and determining by a Diarrhœa? The ſtopping then of a *critical Diarrhœa* is truly hindering the Cure of ſome great Diſeaſe, by a *Diarrhœa*; which Caſe requires very great Judgment to direct Phyſicians to refrain from ſuch unſeaſonable Cures.

On the other hand, when a *Diarrhœa* follows ſome great Diſeaſe, and impedes the Cure of that Diſeaſe, by its continuing, ſpeedy Care muſt be taken for curing the *Diarrhœa*; but eſpecially, if, as in malignant Fevers, *&c.* *Life* and *Death* immediately enſue the curing, or not curing, of it ſpeedily. Yet by the foregoing Account of the *Cauſes* and *Nature* of a *Diarrhœa*, binding Medicines ſtrengthen the *ſymptomatical Diarrhœa*, inſtead of ſtopping it. And there-

fore *aſtringent Medicines* are improperly given on all ſuch Occaſions.

But *aſtringent Medicines* are often improperly adminiſtred for the Cure of that Species of a *Diarrhœa*, where they are commonly uſeful; for do not *aſtringent Medicines* ſtop the ſmall Quantity of *Serum* called forth by the ſtimulating Cauſes of a *Diarrhœa?* Do not *aſtringent* Medicines allay the Stimulus it ſelf in ſome Meaſure? But then theſe powerful *Aſtringents* may hinder the due and neceſſary *Secretions* at the *Guts*, and lock up the ſtimulating Cauſes, from which flow the *Teneſmus*, *Colick-pain*, *Uneaſineſs at Stomach*, *Vomiting*, &c. Symptoms commonly obſerved. On the other hand we are now inſtructed how to avoid theſe Misfortunes, by not locking up the *Looſneſs* before the *Stimulus* is deſtroyed. And therefore we being informed of the proper Uſe of aſtringent Medicines, as well as to know when they are improperly adminiſtred; I proceed to relate the beſt *aſtringent* Medicines to be found among Authors, and theſe, both *Simple* and *Compounded.*

The ſimple Medicines moſt generally commended, are *red Roſes*, *Plantain*, *Quinces*, *Pomegranates*, *Currants*, *Berberries*, *Myrtles*, *Mint*, *female Fern*, *Carduus Mariæ*, *Harefoot*, *Sumach*, *Lentils*, *Haws*, *Juice of Acacia* (with us, of *Sloes*) *the inner*

Rind of Oak, Cornel Berries, the Bark of the Service-Tree, Golden-Rod, Shepherds-Pouch, Biſtort, Tormentil, Solomon's Seal, red Coral, Earth of Lemnos, *Bole-Armoniack, and burnt Harts-horn. Hippocrates* has not only made mention of the greateſt Number of the recited ſimple and uncompounded Medicines, but has likewiſe remark'd the different Effects they produce, eſpecially when the Fruits are green or ripe. [a] *Every Thing*, ſays he, *that taſtes harſh and auſtere, binds up the Belly.* And afterwards, *ripe Pears make Mengo to Stool, but unripe Pears ſtop a Looſneſs.* Again, *wild Apples ſtay a Purging, but they purge when boiled and taken for Food.* Thus accurate was the great *Hippocrates* in attending to every Circumſtance, when he made his Obſervations.

Joel has this *Electuary.*

℞ *Conſervæ Roſarum rubrarum, Diacytonion ex ſucco ſine Speciebus ā* ʒj. *Trochiſcorum è Spodio, è Terrâ ſigillatâ ā* ʒjß. *Syrupi è Myrtillis q. ſ. f. Electuar.*

This is found among the ſecret Medicines of *J. Heurnius.*

[a] De vict. rat. lib. 2. Sect. 4. pag. 360. Fœſ.

℞ *Nucem*

℞ *Nucem unam Moſchatam pulveriſatam, & tantundem Boli, miſce cum Ovi vitello, & in patella coque ſine Butyro in rotulas novem. Utatur primo die Semirotulam, poſtridie integram, tertio die ſeſquirotulam.*

But I am perſuaded that theſe *Lozenges* may be taken more freely without any Danger.

Ludovicus Mercatus, an excellent *Italian* Phyſician, highly recommends the following Mixture; which, he ſays, has been found to be very uſeful, when drank warm in the Morning.

℞ *Saccharum Roſarum, ſolvatur in ſucco Cydoniorum & Aquâ Plantaginis, coletur, ferveſiat, & exinde hauriat.*

Johannes Popius particularly praiſes the *Rob*, or inſpiſſated Juice, of *unripe Sloes*.

We are told by *Petrus Foreſtus*, that a Man was cured of a *Diarrhœa*, after being ill of it three Years, by taking often the Powder of *Acorns*.

Simon Pauli likewiſe informs us, that many of his Fellow-Soldiers were cured of every Kind of Looſneſs, in *Germany*, by taking

king 3ß of *Thlapsi-Seed* (or narrow leaved wild *Cresses*) after every Stool.

I have purposely omitted the bringing into this Place, all the binding Medicines we may find in the Cases of *Hemorrhages*; such as *Japan Earth*, *Dragon's Blood*, &c. frequently administred by Physicians; because they may be found in their proper Place, and are not now much wanted by any Physician who understands the forementioned Account of the proper Uses of *astringent Medicines*, for the Cure of a *Diarrhœa*. But the Omission should be very great, if I did not mention that excellent Composition of *Diascordium* by *Fracastorius*, which has ever since his Time been universally practised all over *Europe*, and where *Europeans*, or his Book, have ever been known.

The general Practice of this Medicine is an evident Proof of its Excellency, and that Physicians depend more upon it, than on any, or all, of the known Medicines. Its Perfection may be now judged of, by my Account of the Nature of a *Diarrhœa*, and the true Designs I have shewn of curing it; and its Defects are easily supplied by the forementioned Account. But for the Want of knowing a *Diarrhœa*, and the Method of its Cure, the late Doctor *Radcliff* made a conceited Improvement of this Medicine of the learned

and

and excellent Physician, *Fracastorius*; which is so far from improving this Composition, that it renders it both useless in the Cure of a *Diarrhœa*, and dangerous in the Practice of *it*, in *Fevers*, and many other Diseases; for which it is, otherwise, found to be very useful: And therefore it has deservedly surprized every Physician, that this Deformity of a Composition was thrust into the late *London Dispensatory*.

The Composition of the most elegant *Fracastorius* may be found in his [a] Book of *Contagious* Diseases, and was first contrived for the *malignant Fever* at *Trent*, which was followed with a *Diarrhœa*, and is pretty faithfully copied into the Dispensatories of other Nations. I will therefore add some Forms that owe their Success to this excellent *Diascordium*.

Franciscus Sylvius, then, prescribes this *Mixture*.

℞ *Diascord. Fracastor.* ʒjß *Confection. Hyacinthor.* ʒj. *Syr. Myrtin.* ℥j. *Aq. Cinnamomi hordeatæ Plantagin. ā* ℥ij. M.

By the Quantity, he designs it for two Doses, or three. But he recommends the follow-

[a] Fol. 104. pag. alterâ lib. 3.

ing Electuary to thoſe that may not like the former Mixture.

℞ *Conſervæ Roſarum rubrarum* ℥ij. *Diaſcordii Fracaſtorii* ʒij. *Confectionis Hyacinthorum* ʒj. *Cornu Cervi uſti & pulveriſati* ʒß. *Syrupi Myrtini q. ſ. ut F. Conditum.*

This Method has been often taken very ſucceſsfully.

℞ *Confection. Fracaſtorii veræ* ℈j. *Speciei ad Confect. de Hyacinth. gr.* xii. *Laudani Londinenſ. gr.* j. *Syr. de Roſis ſiccis q. ſ. ut f. Bol.*

As alſo the following *Mixture.*

℞ *Aquæ Lact. alexiteriæ* ℥viij. *Diaſcordii* ℥ß. *bulliant, & Colaturæ adde Aq. Cinnam. fortis* ℥ij. *Laudani liquidi Sydenhami Gutt.* xx. *Syr. fl. Caryophyllorum* ℥ß. *M. F. Julap. Hujus exhibeantur ſubinde cochlearia* iv.

The moſt proper Drink to be commonly made uſe of by the Sick, is *Rice-Decoction, Toaſt-Water,* and the common *Harts-horn,* or white *Drink.*

Among

Among the common People an *Egg* boiled in *Vinegar*, or *Brandy*, is a great Remedy for a *Diarrhœa*. Our People might have it from the Practice of Physicians, from the *Rosa Anglica*. But [a] *Galen* had some hundreds of Years settled the Character of that easy Remedy. *Moreover*, says that excellent Physician, *if an Egg boiled in Vinegar is eaten, it will dry up a Flux of the Belly.*

The learned *Helmont* extols the same Remedy, with some small Variation in the cooking it. A *Diarrhœa*, he assures us, will be cured with two *Yolks* of *Eggs* boiled in *Rose Vinegar*, and taken by the sick Person.

I might add a great Multitude of Medicines out of Physick-books; but I will only add one more of a different Form from those I have already given. It is a *Plaister* of *Nævius* for the Belly; and it is certain, that Plaisters do more in this and other Diseases, than modern Physicians have lately believed.

℞ *Orizæ torrefactæ* ʒjß. *Mastichis, Thuris ā* ʒij. *Glandium* ʒiij. *Myrtillorum* ʒß. *Resinæ Pini, Ceræ flavæ ā. q. s. ut f Ceratum.*

[a] Lib. 11. de simp. Medic. Facult. p. 81.

SECT. IV.

Of Opiates, Bleeding, Bathing, and Exercise, for curing a DIARRHOEA.

AS *purging* and *astringent Medicines* are principally depended upon by Physicians for *curing* a *Diarrhœa*; so *opiate* Medicines, the third and last Resort of Physicians, come now to be considered. *Opiates* are not only given alone, but are often mixed with the forementioned purging and binding Medicines, to strengthen and ascertain their Operation.

We will then consider the Efficacy of *Opium* and opiate Medicines by themselves; for thereby we shall be enabled to make a Judgment of the Effects they are like to have, when they are combined with other Medicines.

The most sensible Effect of Opium is its laying Men quiet, and rendring them insensible, or very little sensible, of Pain; and I wish the Way this is done, were tolerably well known. But it is likewise supposed to be a *diaphoretick* Medicine, though, the Experiments, brought to evince this its Operation, by no Means prove it; and its Effects in the Cure of a *Diarrhœa*, shew its Power that way to be very inconsiderable.

From

From this its *quieting* Faculty it follows, that a *Diarrhœa*, cauſed by *ſtimulating* the *Guts*, may be cured by *Opium*, and opiate *Medicines*. For as we are quieted, by Supposition, with Opium, or that we are rendered inſenſible of the *Stimulus* by opiate Medicines, the ſtimulating Cauſes work themſelves off while our *Inteſtins* are not irritated with the *Stimulus*. Now the ſtimulating Matter being expelled, the *Contraction* of the *Guts* becomes natural; or, which is the ſame thing, we do not go præternaturally to Stool, or we are cured of a *Diarrhœa*. This Effect of *Opiates* will always be in Proportion to the Quantity of the ſtimulating Matter, or the Degree of its Sharpneſs.

On the other Hand, *Opium* does nothing of it ſelf in the curing a *Serous*, or *watry Looſneſs*, and conſequently its *ſtrengthning* and *diaphoretick* Power is indiſcernable, and next to nothing. Phyſicians continue under mighty Miſtakes as to the Uſefulneſs of *Opium*, and attribute Effects to it very different from this its quieting Power; tho' they are altogether owing to it. They find that an opiate Doſe obtains a good Night to the Sick, and that they do not go ſo frequently to Stool. The *Sleep* is a common Effect of *Opium*, and the Inſenſibility of the Sick a Conſequence of their Sleep; but if we examine into the Progreſs we make in the Diſeaſe,

that is truly nothing; for the Stools are as thin and liquid as before, and more fetid, and the Quantity is juſt the ſame as if they had their common Number of Stools in the time of their Suſpenſion; *h. e.* a Perſon going a Quarter of a Pint every Hour, but now having not gone in five Hours by the Force of *Opium*, his next Stool will be above a Pint; a plain Demonſtration, that the Secretion has been the ſame in all that time, but that the Guts were not irritated, either by the *Sharpneſs*, or *Quantity* of the Excrements. This Obſervation I averr to be very conſtant in this Kind of a *Diarrhœa*.

The fatal Miſtakes that are the Conſequence of theſe falſe Analogies of Phyſicians, are innumerable. To this is owing the pretended, but falſe, Reformation of *Diaſcordium*; but as that were not enough, *Juleps* loaded with *Venice-Treacle* and this new-faſhioned *Diaſcordium*, have, to my Obſervation, been a very common Conveyance of the Sick to the Shades, under the Direction and Conduct of the Reformer himſelf. I hope, for the future, Phyſicians will conſcientiouſly diſtinguiſh between the Sick being carried off by the Violence of a *Diarrhœa*, and by the quieting of the Remedy adminiſtred, with a good Intention, for its Cure.

The

The Helps of *bleeding* and *bathing* must next be considered; for they have been found useful in some Cases, tho' they are not so pressingly and effectually recommended as either *purging*, *binding*, or *opiate Medicines*: So they seem rather to have been tried in desperate Cases, than much to be depended on in our common Practice. However, as it has been my Endeavour all along to discover the proper Quality a Medicine has, that fits it to *Cure* a *Looseness*, and from thence to determine its probable Success, I proceed to examine into the Usefulness of *bleeding*.

Now as no Body can imagine that *bleeding* can change the Sharpness of the Excrements, it is plainly no Cure of a *Diarrhœa*, which is produced by stimulating Causes. Moreover, as *bleeding* cannot restore the defective Secretions, which are the Cause of a *Diarrhœa* from *old Age*, and Diseases; so it is very certain, that bleeding is not so much as *indirectly* the Cure of a *Diarrhœa*. Yet as *Leonardus Botallus*, *Zacutus Lusitanus*, and some few Authors, have found *bleeding* useful in the Cure of a Looseness, we will hereafter consider these Cases; especially that they are Cases of *Dysenteries*, and that these Physicians recommend bleeding in a mighty small, and inconsiderable Quantity.

Bathing likewiſe is not a direct Method in the Cure of a *Diarrhœa*, however uſeful it may be in a Circumſtance or two; which ſhall hereafter be conſidered, when I ſettle the Practice of the *Dyſentery*; yet as it neither deſtroys, nor carries off, the *Stimulus*, one general Cauſe of a Diarrhœa, nor reſtores the other Secretions, *bathing* cannot be a Cure of a Diarrhœa. It is true, *bathing* naturally augments Perſpiration, and may, for that Reaſon, be ſuppoſed to be ſometimes uſeful: But as this Perſpiration cannot continue longer than the time of *bathing*, and muſt be leſſened after the bathing, it is certain that bathing will do nothing towards a Cure. The Truth of all this is manifeſt from what *Sanctorius* tells us, that [a] *warm Air, and Baths actually warm, help Perſpiration, and cool the inward Parts, and make our Bodies lighter, excepting in Caſes of Crudity.* Now, whoever underſtands the Language of Phyſicians, will acknowledge, that *bathing* can never Cure a *Diarrhœa*, becauſe it is occaſioned by a great *Crudity* of *Blood*, which is not helped by *bathing*.

We come laſtly to conſider what *Exerciſe* does in curing a Diarrhœa. *Hippocrates* has no where recommended *Exerciſe* for curing any *Looſneſs*. He tells us,

[a] Lib. 2. de Morb. Mulier. pag. 707.

[b] that

[b] that *travelling in Carriages that are hung cures the Whites of Women*; but as I formerly obſerved, he mentions People ill of a Looſneſs by *Exerciſe*. And, ſpeaking of *walking*, he tells us, [c] that *walking in the Morning makes us go to Stool.* When the elegant *Corn. Celſus* treats of the *curing* a *Diarrhœa*, he is very cautious in recommending *Exerciſe*; and indeed ſpeaks of that which is not violent. [d] *There is no want*, ſays the great *Celſus*, of *walking nor of rubbing in this Diſtemper*; *it may be uſeful to ride in a Chariot, or rather a Horſeback*; *for there is nothing that ſtrengthens the Guts more.*

Phyſicians in theſe latter Times, and who have nothing of that Experience of *Exerciſe* that was ſo common among ancient Phyſicians, are leſs cautious in recommending it, and write more in Praiſes of it. *What great Perverſion*, ſays Dr. *Sydenham*, *can we imagine to be in the Functions and Offices of our Bodies, or what other natural Defect in their Organs, which ſo many thouſand* Jolts *repeated in the open Air, in one Day, are not ſufficient to retrieve? Whoſe native Heat can be ſo much extinguiſhed, as not to be fanned by this Motion, and begin again to glow?* And in another Place he ſo far extols *Exer-*

[b] Lib. 2. de Vict. rat. pag. 334, 335. [cd] Lib. 4. Cap. 19.

ciſe

ciſe (*riding a Horſe-back eſpecially*) that he recommends it as expreſly for a Cure of *Conſumptions*, and to be as powerful, as the *Jeſuits-Bark* for the Cure of an *Ague*.

Dr. *Sydenham*, without doubt, had a very high Eſteem of *riding*, when he thus recommends it without Meaſure. He ſeldom falls into ſuch Faults; but it is the Fate of good Men to run into ſome Exceſs in the Praiſes of what they value; tho' perhaps he found this Kind of Argument neceſſary to make this Exerciſe to be well received by the People.

It is certain, that *Exerciſe* was cautiouſly received into the curative Branch of Phyſick, and that it was firſt invented for keeping Men in Health, and preſerving them from falling into Diſeaſes, or their incroaching upon Life; yet Exerciſe, in a very little Time, came to be ſo much in Vogue, that it did not remain within its firſt Boundaries, but was extended as the ſureſt and ſafeſt Method of curing many Diſeaſes. *Herodicus*, a Phyſician of great Eſteem, very much contributed to recommend *Exerciſe* in the curative Branch of Phyſick; but his Error and well intended Zeal was ſmartly reproved by his Scholar *Hippocrates*. *Herodicus*, he tells us, *exhauſted People ill of Fevers with much walking, with frequent wreſtling, and fomenting, and that very wrongfully; for ſtarving, wreſtling, walking,*

ing, running, rubbing, and the like, do great Hurt in the Cure of a Fever. And *Plato* ſpeaking of *Exerciſe*, when it is employed even for keeping Men in Health, has this excellent and inſtructive Aphoriſm μὴ τὰ πολλὰ ἄλλα τὰ μέτρια γυμνάσια εὐχείαν ἐμποιεῖν τοῖς ἀνθρώποις, *h. e.* that it is not much Exerciſe, but exerciſe within Bounds and Meaſure that gives Men a good Habit of Body.

And therefore we will return to conſider how directly *Exerciſe* tends to cure a *Diarrhœa*, as alſo the Kind of *Exerciſe* recommended by the great and learned *Celſus* for that Purpoſe; and how far *riding* is to be continued with *Safety*.

Exerciſe accelerates the Liquors of the Body, and makes ſo great a Separation of all of them, that the Body is rendered thin and lifeleſs under a long Continuance of the more violent *Exerciſes*: Theſe were never deſigned in any Degree for curing a Diſeaſe, however uſeful they were believed to be for keeping Men in the preſent State of Health they poſſeſs'd, when theſe Exerciſes were well moderated and meaſured. Inſomuch, that we find *walking*, an Exerciſe much recommended in the *prophylactick Way*, altogether excluded and forbidden by the excellent *Celſus* in curing a *Diarrhœa*; who, at the ſame time, recommends the Practice of *riding*.

It

It is manifeſt from the general Effect of Exerciſe, that the Diſcharge by Perſpiration is great, and often very ſudden; but *riding* promotes *Tranſpiration*, by rendering the Blood liquid, and encreaſing its Motion; for if we conſider a Man on *Horſeback* under any Degree of Motion whatſoever, his Liquors not only flow by the *Heart* and *Arteries* (their common impelling Cauſes) but they likewiſe partake of the common Motion of the *Horſe*; which compounded Motion not only increaſes the Motion of the Blood in general, but comminutes and divides its Parts differently in different Veſſels, according to their Directions. Now the Blood rendered more liquid, and having its Velocity augmented, makes greater Secretions at the Glands of the Skin, or the Tranſpiration is augmented. But a greater Quantity of the ſerous Part of the Blood being tranſpired, a leſs Quantity of *Serum* is ſecreted at the *Kidneys* and *Inteſtins*; and it being on Account of great Quantities of this Serum being diſcharged into the *Guts*, that the moſt dangerous Sorts of a *Diarrhœa* proceed, and a leſs Quantity being ſecreted at the Guts, by *riding*; it is manifeſt that *riding* is a direct Cure of that Kind of *Diarrhœa*. On the other Hand, the Expence of Spirits made by *old People*, and People worn out by ſome other Diſeaſes (who are principally

pally ſubject to the *Diarrhœa* that is cured by Exerciſe) is ſo great by walking, that they cannot *walk* long enough to comminute their Blood as to excite Tranſpiration, to any Purpoſe. On the contrary, the Waſte of Spirits made in the *Muſcles* that ſerve to *walking*, leaves the Blood in a groſſer State, and ſo rather encreaſes, than cures, the *Diarrhœa*, as the great *Celſus* had obſerved; and was the Reaſon why he forbad *walking*, and recommended *riding*, for the Cure of a *Diarrhœa*.

It follows from this Account, not only that this is the Sort of *Diarrhœa* cured by *riding*, but alſo that *riding*, or any other Exerciſe, cannot affect the *Sharpneſs* of the *Stools*, (the other general Cauſe of a *Diarrhœa*) and cannot therefore prove a Cure for the Kinds of *Diarrhœa* that proceed from that Cauſe.

It follows likewiſe that a *Diarrhœa* from the Cauſes of *old Age*, *&c.* are no otherwiſe cured than as the Blood becomes ſtronger, and more pure by Exerciſe; and conſequently, that the *ſtrengthning* of the *Guts*, ſuppoſed by *Celſus*, and the Cure of the *Whites*, and the ſtrengthning of the *Womb*, mentioned by *Hippocrates*, only follow the general Strength acquired in the whole Body by *riding*; ſo that tho' *riding* cures

cures a *Diarrhœa*, when the Body is ſtrengthned, yet that is not an Effect of the *Guts* being ſtronger, but both of them are an Effect of the ſame common Cauſe.

It follows thirdly, that *riding* will never prove the Cure of a *Diarrhœa*, when *riding*, or any other *Exerciſe*, renders the ſick Perſon weaker. This plainly flows from the foregoing Account, and is very conſtant in Experience; however modern Phyſicians have not attended to it. Ancient Phyſicians, who were ſagacious Obſervers, have been apprized of ſome ill Effects that followed the *Violence*, or a *continuing* too long in the Exerciſe they had recommended. *Galen* reckoned *riding*, both an *Exerciſe*, and a *Labour*; which therefore, in his Opinion, was great Exerciſe. Hence, Phyſicians, in the Caſes of *weak* People, recommended rather the carrying them in a *Chariot*, a *Litter*, or a *Chair*, but more particularly the carrying the Sick in *Hammocks*, *Cradles*, and eſpecially *ſailing*. *Aſclepiades* (who firſt invented Hammocks) contrived them on a double Account; both that by their ſwinging they might draw on *Sleep*, and that they might wear out Diſeaſes.

To this uſe of eaſy *Exerciſe* was added the uſe of *Cradles*, firſt mentioned by *Celſus*; but *ſailing* was preferred to all of them in the Cure of many Diſeaſes. *Celſus* par-

ticularly commends *ſailing* for every Kind of *Cough*. *Cælius Aurelianus* and *Aretæus* ſay, that *ſailing* is a good Cure for the *Headach*, an *Epilepſy*, (if the Sick can agree with ſailing) for *ſpitting Blood*, for a *Conſumption*, *Jaundice*, and a *Dropſy*. *Sailing* was held of that Eſteem by ancient Phyſicians in Caſes of *Conſumptions*, that *Pliny* informs us of a conſtant Practice of conſumptive People to ſail to *Egypt* for their Health. *Annæus Gallio*, who was very conſumptive, went to *Egypt* at the End of his Conſulſhip, and recovered his Health. *Plutarch* has this proverbial Expreſſion, *that it was pleaſanteſt ſailing near the Shore, and walking near the Sea.* So great a Value Authors had of ſailing.

On the other Hand, modern Phyſicians, who have little Experience of *Exerciſe*, recommend it vehemently, and their Recommendations of this Nature are received as any other modiſh and faſhionable Piece of Phyſick; whereas had they conſidered *riding* to have different Effects, on a *trotting* and an *ambling* Horſe, on an Horſe that has an eaſy walk, and one that goes very hard; they might have eſteemed *riding* an Exerciſe full of Labour and Fatigue, as *Galen* had done: nor ſhould we have ſo great Encomiums on *repeated Joltings in the open Air*, which Dr. *Sydenham* elegantly recommends, without

out great Judgment. Not only *Galen* makes this Distinction in riding, but *Hippocrates* has recorded, for our Information, that *continual riding* (so zealously recommended) *begets great Wearinesse, and renders Men unfruitful, and unfit for Generation*, &c.

From which Considerations we may conclude, that we ought to be well advised of the Consequences of Exercise, before we direct it. We ought to know what Bodies are fit and unfit for Exercise. As also Physicians ought to weigh the Nature of the Disease for which they would recommend Exercise; for there is a certain Dose of Exercise, proper for Men of different Constitutions, and as they may labour under different Diseases, as well as under the various Circumstances of any one Disease.

This Difficulty is greater (if possible) at present than formerly, though it is not so ingeuuously acknowledged. *Galen* declared, that nothing rendered Physick so conjectural as the small Knowledge Physicians had of the *Virtues* of Medicines. But what the great *Mercurialis* informs us of, is a mighty Scandal to Christianity, and a standing Reproach to many Members of our College at this time, who make a Sale of Men's Lives, without Remorse; while Pagans forsook the gainful Practice of Physick, because they could not arrive at the Skill of dosing Medicines.

dicines. *Ex iis rebus,* says the learned *Hieronymus Mercurialis, quæ Medicorum artem conjecturalem & pene incertam efficere a multis creduntur, præcipuam remediorum omnium adhibendorum mensuram esse, semper putatum fuit; quam nonnulli antiquorum aliquando tanti fecerunt, ut quasi ejus cognoscendæ spe dejecti medicinæ opera exercere recusaverint.*

CHAP. VII.

The Practice of Physicians for the serous *and* symptomatick DIARRHOEA; *with the* Species *of a* DIARRHOEA, *that are most easy, or more difficultly cured; or the Prognosticks of a* DIARRHOEA *deduced from Practice.*

IN the foregoing Chapter we find the Cure of a *Diarrhœa* has been altogether managed by Physicians with *purging, binding* and *opiate* Medicines, which they have administred without any other Skill

or Design, besides that these Sorts of Medicines have sometimes been found useful in the *Cure* of a *Diarrhœa*; and without having Skill to avoid the Times when these very Medicines have proved very hurtful, and pernicious, in the Practice of a *Diarrhœa*. But by the Account given in the fore-mentioned Place, it is manifest, why *purging*, *binding* and *opiate* Medicines cure a *Diarrhœa*; and the Sorts of a *Diarrhœa*, that can possibly be cured by these Medicines, have been determined. We find, *viz.* that every *Diarrhœa* produced by stimulating Excrements, and which the judicious *Celsus* had long ago told us how they cured themselves, may be cured by *vomiting*, *purging*, *binding* and *opiate* Medicines. *Sed uno die fluere Alvum sæpe pro valetudine est: atque etiam pluribus,* DUM FEBRIS ABSIT, ET INTRA SEPTIMUM DIEM ID CONQUIESCAT. It is evident then, that a *Diarrhœa* from a Stimulus, cures it self, or may be carried off by a purging Medicine. But when a *Diarrhœa* is joined with a *Fever*, or (which is worse) follows it, how unaccountable are these Physicians, who leave those sick People upon Nature; or how treacherous are they, who delude the Sick with the Danger of putting a Stop to a *Diarrhœa*; and that only, because their Endeavours to stop it prove fruitless? We find, by this Account of *Celsus*, that the false Courage they give their

Patients, neither proceeds from Physick, nor common Honesty.

But what is truly deplorable, we find not any Means in Physick for curing the half, and these the most dangerous Sorts of a *Diarrhœa*; wherein the common and ruled Methods are really pernicious and hurtful.

Franciſ. Deleboe Sylvius, [a] gives us a very poor Account of a *ſerous Looſneſs*, and the Practice, ariſing from ſuch Accounts, can hardly prove ſucceſsful. *The Blood*, ſays he, *becomes ſerous by drinking too much Water, Beer, and even Brandy-Wine, whereby the Firmneſs of every Part is deſtroyed, and the Tone of theſe Parts brought to Ruin.* And in the Cure of this *Diarrhœa*, he gives us this extravagant Advice; *nothing hinders, if nothing elſe forbids it, to evacuate ſometimes a great Part of this ſuperfluous Serum by a Purge that carries off Water.* Now we find all the foregoing Reaſoning and Experience forbid this Practice; and I wiſh he had mentioned theſe Things, that did forbid this his Method, in his own Experience; but he does not ſeem to have any Notion of this *Diarrhœa*.

Doctor *Willis* give us a better Account of the Violence of a *ſerous Diarrhœa* at

[a] Lib. 1. prax. cap. 13.

ſome Times; but at the ſame Time thinks it ſo very violent, that it no longer deſerves that Name, which he therefore calls *an unbloody Dyſentery*. We will not examine what right the *Doctor* has to call this a *Dyſentery*, it being more to the Purpoſe to receive his Account of this violent Diſtemper, and what ill Succeſs attended the Practice of *vomiting*, *purging*, and the forementioned Medicines.

[a] *In the Year* 1670, ſays the learned Doctor, *and about the autumnal Equinox, very many were ſeized with this unbloody, but ſharp, and moſt dangerous*, Dyſentery. *A Diſtemper that took thoſe, that laboured under it, ſuddenly and frequently, without any manifeſt Cauſe, with violent vomiting and frequent Stools, and theſe watry; ſo that they were quickly reduced to the greateſt Weakneſs, and into the moſt frightful Faintneſs and loſs of Strength. I have known many ſtrong Men that, but the Day before, were in good Health; yet, in twelve Hours, they were ſo diſpirited under the Tyranny of this Diſtemper, that they ſeemed to be in a dying Condition, with a weak Pulſe, cold Sweats, and with a difficult and heaving Breathing; and a great many were quickly kill'd with the Diſeaſe, for want of proper Medicines and good Advice. Few, at that Time, had bloody Stools, and very few had bilious*

[a] De medicam. Oper. Sect. 3. Cap. 3.

Stools;

Stools; but the Stools of a great Multitude were watry, almoſt clear Water, and in great Abundance.

Thus Doctor *Willis* deſcribes the ſerous Diarrhœa, in his Time; but he finds, that the Cure of it cannot be managed by the great, common, and only Medicines, adminiſtred for that Purpoſe. *Evacuations of any Kind*, ſays the mentioned Doctor, *were of no Manner of Uſe*, and bleeding, vomiting, and purging, *were always hurtful; but* Cordials, *and the ſtrongeſt of them, that abounded moſt with Spirit, and Sulphur, and volatile Salt, were the moſt beneficial; inſomuch, that Brandy, burned with Sugar, was a common Remedy among the People; which was found very uſeful in that Sort of* Dyſentery. In this View he preſcribes ſeveral Forms of Cordial Medicines, whereof I will add one or two; becauſe the reſt may be found in that part of the *Doctor*'s Book I have already mentioned.

℞ *Theriac. Andromachi* ʒj. *vel* ʒjß. *Sumat in lecto, ſuperbibendo Julapii ſequent. cochlear.* vij. *vel* viij. *& repetat. tertiâ, quartâ, vel quintâ quâque horâ.*

℞ *Aq. Menth. Cinnam. hordeat.* ā ʒiij. *Aq. Cinnam.* (*fortis fortaſſe*) *Epidemic. Theriacal.* ā ʒij. *Margar. Pul.* ʒj.

Sacchari cryſtal. ℥ß. *M. F. Julap.*

He adviſes moreover to give twenty Drops of liquid *Quince-Laudanum*, if the ſick Perſon's Pulſe keeps up, and his breathing is eaſy; ſo judiciouſly cautious is the *Doctor*, in adminiſtring *opiate* Medicines, even in Caſes of Pain; though we may learn afterwards, that Doctor *Sydenham* found that Kind of Medicine uſeful, in this very Diſtemper, in *London*.

This is a very remarkable Hiſtory, but what has made very little Impreſſion on the Phyſicians in this Town, in Caſes of a *Diarrhœa*; for they have fallen back into an indiſcriminating Practice by *purging* Medicines; and often carry off their Patients, ſooner than the Diſeaſe.

But I muſt obſerve, that the learned Doctor *Willis* finds it very difficult to account for this Diſeaſe; and no wonder! For he ſuppoſes a Man can fall ſuddenly from perfect Health, into this languid and diſpirited State; a Suppoſition, equally contrary to Reaſon and Experience. It is one Thing, for an ordinary Man unacquainted with the Changes of his Body, to relate ſuch a Fact to his Phyſician; and altogether different for a Phyſician not to diſcover the previous Cauſes that brought his Patient into this ruinous decay of Strength. This Inſtance ſhews the different Notions

Phyſicians

Phyſicians muſt take from a plain Theory, drawn from, and confirmed, by Experience; and ever ſo great a Multitude of Caſes, and Obſervations, that are not duly explained. I perſuade my ſelf, that my Reader, who truly underſtands what I have ſaid of the *Cauſes* and *Nature* of a *Diarrhœa*, has a juſter Notion of this Caſe, than he had, before he conſidered my foregoing Theory. The ſudden Dejection of Spirits was, in theſe Caſes, ſo great, that the learned Doctor could not think any other Cauſe ſufficient, *beſides a Corruption of the beſt Juices of the Body*, viz. *the nervous and nutritious, already joyned to the ſolid Parts of the Body, that were melted down on this Occaſion, and did redound in the Maſs of Blood*; which laſt Expreſſion, I muſt own, gives me no manner of Idea.

But that Men were only, apparently, well to their own thinking, and had a real Diſeaſe preceded this waſting, ſerous, *Diarrhœa*, may be known by what the *judicious* and *ſagacious* Doctor *Sydenham* informs us; as well as by my mentioned Theory; which is no ſmall Confirmation of the Truth of it, and is, at the ſame Time, no mean and inconſiderable Proof, for the Neceſſity of Thinking, in Matters of Phyſick.

I proceed with this Account, which Doctor *Sydenham* gives us, of the *Diarrhœa* (Dyſentery as he likewiſe calls it) in 1670; becauſe it

is both desireable to know this particular History, and that we may see how my Theory *confirms*, *corrects* and *improves* their Experience, and extends to infinite more Cases, than the few Instances and Examples of Doctor *Willis* and Dr. *Sydenham*; which is, on that Account, infinitely more instructing.

Doctor *Sydenham* does not pretend that People fell ill of this *Diarrhœa* all of a sudden, or that it quickly killed Men, that were lately in Health and Vigour. For it began *with shaking and trembling, which were followed with an universal Heat over all the Body* (*as is common in the Cases of Fevers*) *then came the Griping, which was quickly followed with Stools.* It is true, he tells us, that the *Griping* was often the first Complaint, and that the Stools followed it; but this was very seldom, for he informs us, that *the Sick were commonly feverish, with a Tongue deep furred with white, which was sometimes black, when they had more Fever*, as he conjectures.

It is not possible for a Man, at once, to fall into so great a Loss of Strength, as is acknowledged, by both these eminent Physicians, to have been common in this *Dysentery*, as they name it. However, it will be very useful to relate, from Doctor *Sydenham*, some calamitous Circumstances of this Disease, that are not to be found in Doctor *Willis*. *The Spi-*

rits

rits of the Sick were diſſipated, their Strength deſtroyed, and they had every Symptom of a malignant Fever. This Diſtemper did not only occaſion the greateſt Pain and Sickneſs, but carried the Sick alſo into the greateſt Danger of Life, if it was not skilfully treated; for, as the Forces of vital Heat and Spirits were deſtroyed, by the frequent Stools, and exhauſted, before the peccant Matter could be thrown out of the Blood, ſo they were in continual Danger of dying, the Coldneſs of Hands and Feet coming upon them, and Death it ſelf became deſireable in a ſhorter Time. The Doctor proceeds to relate ſome very fatal Conſequences of this Diſeaſe, in thoſe who eſcaped the Fury of the Diſtemper; but as all, or moſt of them, are only more, or leſs, the ſame, it would not be of any Uſe to tranſcribe them into this Place.

In raiſing Indications for curing this ſuppoſed *Dyſentery* (for there are no Symptoms of that Diſeaſe (beſides the Griping) in this preſent Hiſtory) which are likewiſe common to *Colicks*, a *Diarrhœa*, as well as a *Dyſentery*; Doctor *Sydenham* tells us expreſly, *that he found it was a particular Fever, turned inwards upon the Bowels*; or, in the common Language of Phyſicians, that this *Diarrhœa* was the Symptom of a *Fever*. But as I have already explained that State and Circumſtance of a *Fever*, when a *Diarrhœa* follows it; and

as

as that Explanation, I may presume, is more natural and mechanical, than the Account given here of it, by the Doctor, I will only observe, that Examples of this Kind of a *Diarrhœa* are very few, but the Practices proper on these Occasions, are still fewer; since that by Doctor *Willis* is the most direct, however imperfect. These Considerations, and the vast Mortality that ensued upon the contrary Practice, to that followed by Doctor *Willis*, ought to have made their Followers more cautious, and not to have insisted upon *purging*, *bleeding*, and *Opiates*, so pertinaciously, and improperly, as we find they do at this Time.

The sagacious and worthy Doctor *Sydenham* seemed willing to have compared this *Dysentery*, he relates, with that, which is very common in *Ireland*, and of which, he seems not to have had any Account; but as the *Dysentery* in *Ireland* is the same we find described in the Books of Physick, and which I am afterwards to explain, it is needless to make the Comparison which the Doctor seemed inclined to do, more especially, that his Wants are truly answered, in the Account I have already given. *Perhaps*, says that candid Physician, *there may arise as different and various Sorts of* Dysenteries, *as there are of Small Pox, and other epidemick Diseases, that are proper and peculiar in different*

ferent Conſtitutions, and which, on that Account, require a proper and peculiar Method of Practice.

I cannot refrain from adding what this worthy Perſon continues, becauſe it gives us a juſt Taſte of the Uſefulneſs, and the Difficulty of the Method, I have purſued. *We need not wonder at the ſporting of Nature in this Matter, ſince every one readily confeſſes, that the more deeply we penetrate into any of the Works of Nature, the more clearly we may diſcern the great Variety, and almoſt divine Artifice, of its Ways of working, which far ſurpaſs our Reach and Underſtanding: Inſomuch, that whoever he is, who takes upon him, to have a right Conception of theſe things, and would trace out, Step by Step, the various Operations of Nature, muſt partly fail in ſo great an Undertaking, and never hope, to be altogether Maſter of his Wiſh: In the mean time, he may aſſuredly propoſe to reap Reproaches, inſtead of a plentiful Harveſt, he might expect, for ſo great and uſeful Diſcoveries*; and for *the very Reaſon, that he is the firſt that made them.*

Had this, and other, ſo great and penetrating Authors, not ſo pertinaciouſly inſiſted in a barren and an impoſſible Method of Inquiry, they had certainly prevented any after Search; for I am verily perſuaded, that their Capa-

Capacities for ſuch Inquiries, were greater than mine, and the Advantages I have, in being more ſucceſsful, is altogether owing to my Method. How is it poſſible to delineate every particular Appearance of a *Diarrhœa*, becauſe their Variations are truly infinite; or to how little purpoſe ſhould this Account ſerve, if it was poſſible? For to Inſtance in a ſymptomatick *Looſneſs* only; May not a *Diarrhœa* follow, and be the Symptom of every Diſeaſe? and if we comprehend the different Degrees of Violence, that offer themſelves to an Obſerver, the Account is manifeſtly endleſs. If this, then, is the Caſe of one Species of a *Diarrhœa*, how immenſly muſt this Account ſwell, if we were to record the various, and more than infinite, Caſes of every *Looſneſs*, and its Species? It would not only be the Work of Ages, to collect theſe Hiſtories, but no Man lives long enough, to peruſe the Collection.

It is ſurely, far more natural, eaſy, and practicable, to collect the moſt conſtant Symptoms of every *Looſneſs*, and to endeavour ſo to explain theſe Symptoms and Effects of a *Looſneſs*, that they may lead us into their Nature, and the Cauſes of every Looſneſs. If then we can come at the Nature of every Looſneſs, there remains no Difficulty about the Way of curing them, be their Appearance and Shape ever ſo various and infinite.

The

The direct Method of curing being thus obvious, the Probability of Succeſs muſt be, as is the Nature of the Looſneſs we come to cure, and the Force of the Medicines we adminiſter reſpectively; all which I have endeavoured to perform, in the foregoing Work. I confeſs, I might have done this more minutely, and more to the Satisfaction of ſome few Readers; but I am afraid, I ſhould have diſguſted and diſcouraged the far greateſt Number, whoſe Good and Benefit I intend. However, as the Curableneſs and Incurableneſs of a *Diarrhœa*, and its Kinds, have never yet been diſtinguiſhed in Practice, it may be uſeful to illuſtrate and adorn that Part, in a few Examples, that, at leaſt, Phyſicians may diſcern the Difficulties they enter upon, in the Cure of every particular Perſon, that is put under their Care.

In order to perform this with the greateſt Clearneſs and Preſpicuity, I reduce my Experiences into the moſt difficult Caſes of every Kind of a *Diarrhœa*; and as the Practice in them has always been by one, and that, the beſt Medicine, that was ever adminiſtred for the Cure of that Diſeaſe; we may quickly perceive, which Sort of *Diarrhœa* moſt readily yeilded to it, and which is moſt ready to return, after it has been ſuppreſſed by the Medicine, or, which is all the ſame, we perceive what Species of a *Diarrhœa* receives

the

the moſt perfect Cure, and which of them is naturally moſt obſtinate, and reſiſts moſt, this one, and beſt Medicine; for, as I have very commonly ſucceeded with this Medicine, after the Medicines in common Practice have proved altogether uſeleſs, in the Hands of the moſt eminent Phyſicians, theſe thirty Years; ſo, the Facts that I am to relate, may be conſidered, as if eſtabliſhed, under the Practice of any other Medicine.

I will begin with the Sorts of a *Diarrhœa*, that are moſt eaſily cured, but that have reſiſted the Practices of other Phyſicians, unacquainted with a right Theory of a *Looſneſs*, and that were not aſſiſted with ſo powerful a Medicine; I will next proceed to more different Caſes, in that Kind, and afterwards, to thoſe Sorts, that are more untractable in their own Nature.

History I.

In the Year 1707 *Brigadier* (now Major) *General Crowther* had been a conſiderable time ill of a *Diarrhœa*, under the Direction of the late Sir *Samuel Garth*, who had tried every Method for his Recovery. But as the *Brigadier* grew very weak, and his *Diarrhœa* did not abate of its Violence, he ſent for me. I found the *Brigadier* going about thirty times in twenty Hours. His

Pulſe

Pulſe was quicker than natural. He was without Sleep: He ſtill continued to be griped, not only before he wanted to go to Stool, but in the intermediate times alſo. I ordered him that Morning the following Powder.

℞ *Pulver. radic. Rhabarb. electi* ℈j. *Cinnamomi acerr. gr.* viij. *M. F. pulvis quantociùs exhibendus.*

When the Operation of the purging Powder was over, he took, about ſix that Evening, a Doſe of my Medicine for curing a *Looſneſs*. I called at eight, and he told me, he thought himſelf already cured. He had eight Stools after the Powder, but never a Stool after the Medicine. I left him two Doſes more of my Medicine; one to be taken at Bed-time, and another the next Morning, if he ſhould have a Stool in the Night. He did not take this third Doſe, becauſe he had no more Stools. However, he took this Doſe next Evening, as he was laid to ſleep, and was perfectly recovered of the *Diarrhœa*.

HISTORY. II.

I could give hundreds of Examples of ſuch ſudden Recoveries of every *Diarrhœa*

and other *Looſneſs* of this Kind, if ſuch Caſes were of any Uſe to Phyſicians. I proceed rather to another Inſtance of the ſame Kind, but where the Patient was weaker, both naturally, and by the continuing of her Diſeaſe, with a very weak Conſtitution. I was called on *Sunday December* the 18th to Miſs *Nairn*, a Daughter of Sir *David Nairn*. This young Lady is of a very weakly Conſtitution, which was very near worn out with a *Diarrhœa*, that held her for a long time, with great Violence. Her Phyſicians had often gone the Round of *purging* and *binding*, and never failed of an *Opiate*, without an Abatement of any Symptom.

This young Lady was ſo weak, that ſhe could not bear any *purging* Medicine, for this Reaſon, this Clyſter was injected, before my Medicine was adminiſtred.

℞ *Baccar. Juniperi contuſar.* ℥jß. *flor. Chamæm.* ℥vj. *Bulliant in Aq. commun.* ℥x. *ad* vj. *Colaturæ adde dimidium Ovi vitelli, Ol. juniperi* ℥j. *M. F. Enema.*

When the Clyſter came off, ſhe took the firſt Doſe of my Medicine, and was perfectly cured with three or four more Doſes, by the 20th. I met that Day her former Phyſician at *Old Man's Coffee-Houſe*, who askt, what Hopes I had, to cure this Lady, and when

when I told him, I believed, I ſhould cure her, he anſwered me pertly, and with ſome Aſſurance, that it was impoſſible for me to do it. I offered him a Wager for her being well next *Thurſday*, (for ſhe was at this time recovered) but he was not ſo free to venture his Money, as his Words.

HISTORY III.

I was deſired by Sir *Hans Sloan* to viſit a Gentlewoman in *Moor-Fields*. We met on *Wedneſday* in the Evening. She had many *Stools* with *griping*, and was ſo exhauſted with the *Diarrhœa* and *Age*, that I told Sir *Hans* ſhe had not Life enough left to recover; but that he might judge of the Efficacy of the Medicine, I did not doubt of putting a Stop to her *Looſneſs* before ſhe died. She took my Medicine, and her Diſeaſe was cured by *Saturday* Morning; but ſhe died on *Sunday*.

In all the Kinds of a *Looſneſs*, the Sick drink the common *Hartſhorn Decoction*, it being properly enough contrived, and being a Drink very agreeable to the Sick.

But to put an End to the Practice of this Kind of a *Diarrhœa*, I am fully perſuaded, that my *Medicine* is an abſolute *Cure* for all thoſe Caſes, if it is adminiſtred when the

Sick are left with a poſſibility of retrieving their ruined Strength. For in many hundreds of Experiences, I have always found, that People in the moſt deſperate State of Weakneſs, every Day recovered their Strength, when a Stop is put to the *Diarrhœa*, and that it did not follow, or was the Symptom of, another Diſeaſe. A *Diarrhœa*, that is the Symptom of ſome other Diſeaſe, ſubſiſts as the Effect of that Diſeaſe, and returns in Proportion to the firſt Diſeaſe receiving its Cure; for though a Medicine may be ſufficient to put a Stop to the *Looſneſs*, and even to help the original Diſeaſe; yet ſo ſoon as this becomes worſe, the *Looſneſs* returns at the ſame Time.

The *Diarrhœa*, that is more difficult to be cured than theſe that proceed from ſtimulating Cauſes, is that which proceeds from *Age*; and that the Conſtitution of the Sick is at that time worn out. It will be proper then to add a Caſe of this Kind, and, from thence, to proceed to more difficult Caſes of a *Diarrhœa*.

History IV.

The Honourable *James Vernon* Eſq; had been ſix Weeks ill of a *Diarrhœa*, under the Care of Sir *Richard Blackmore*, who not ſucceeding

ſucceeding in all that time, Mr. *Vernon* put himſelf under the Care of Sir *Samuel Garth*: but the *Diarrhœa* ſtill continuing too powerful for his Adminiſtrations, and Mr. *Vernon* being extremely weak, I was adviſed with for him, *February* 27. He was cured the firſt of *March* by my Medicine. I ordered him an Infuſion to ſtrengthen his Blood, and thereby to prevent a Return of the *Diarrhœa*; which Method was ſo effectual, that his Conſtitution mended, and he has lived many Years in as good Health as a Man of his Age commonly does.

HISTORY V.

It has been ſhewn through the Beginning of this Book, that when a *Diarrhœa* is the Symptom of ſome other Diſeaſe, it is more difficult to be cured than the Greatneſs of the *Diarrhœa*. This is manifeſt in Experience, as we find in the two following Caſes. The Honourable *Langham Booth* Eſq; was prodigiouſly ſwelled with a *Dropſy*, and was the Charge of Sir *Samuel Garth*. He fell into a *Diarrhœa*, which Sir *Samuel* could not check. I was deſired to ſee Mr. *Booth*, together with Sir *Samuel Garth*, *December* 25, 1712. His Stools were many, but with little Griping, and without any great Quantity of *Slime*, *Gall*, or other Humours. I

found it very difficult to be cured the firſt Day, notwithſtanding the Mildneſs of the Symptoms that attended this frequent purging. The 26th he took a large Doſe of my *Electuary* about Noon, which was repeated at four of the Clock, and at Bed-time. He had one Stool at four that Afternoon, and one at eight; but then the *Diarrhœa* ſtoped; and Mr. *Booth* is alive at this time, and was afterwards cured of his *Dropſy*.

Mr. *Head*, a Grocer, who had a *Diarrhœa* following a *Phthiſis*, or Conſumption, was cured between the 6th of *October*, and the 10th of the ſame Month. It returned once or twice for a Day; and, at laſt, he kept free of his *Diarrhœa* for above ſix Months; when he died of the *Phthiſis*, without ever being troubled again with the *Diarrhœa*.

But as the greateſt and moſt ſudden Changes are in *Fevers*, more than in any Diſeaſe; ſo the *Diarrhœa*, that follows them, is both the hardeſt to be cured, and is moſt liable to return. Hence in all *malignant Fevers* a *Diarrhœa* can hardly ever be cured by the Medicines, commonly adminiſtred for the Cure of a *Looſneſs*; they being very oppoſite to the Cure of the *Fever*, and neither the *Fever*, nor its preſſing Symptom, admit of any Relief from theſe Remedies.

HISTORY VI.

Mrs. *Broun*, whoſe Husband commands one of his Majeſty's Ships of the fourth Rate, with a diſtinguiſhed Character, had been long ill of a *Diarrhœa*, under the Care of diverſe Phyſicians; ſo many, and without any Benefit, that ſhe gave her ſelf up as incurable. The laſt was our worthy Preſident, but he giving her a Doſe of *Ipecacuanha*, and that working very violently, put her out of all Hopes of living. Her *Stools* were many, and without *Griping*. She was feveriſh, and ſhe made very little Water. She took my Medicine, made a little more diaphoretick, three Times a Day, for a Week, and recovered; but ſhe continued weak ſeveral Months.

HISTORY VII.

Of any Kind of a *Diarrhœa* the watry has been always found the hardeſt to be cured, and ſtill worſe, when it is the Symptom of another Diſeaſe.

Mrs. *Goedart* was taken ill, in *Auguſt*, of a *Diarrhœa:* Her Stools were a clear Water, and ſhe had a Stool almoſt every Hour. There was no Griping, ſhe was feveriſh, and made very little Water.

The *Diarrhœa* (as we find in the former Edition of this Book) did not yield to purging Medicines, tho' the gentleſt, and given to the beſt Advantage; neither were cordial and alexipharmack Medicines of any Uſe: So that on the fifteenth, ſhe took a Vomit of *Carduus-Tea*, and afterwards a Doſe of my Medicine for curing Fluxes; ſhe took a ſecond Doſe in the Morning of the ſixteenth, and thereby was cured of her *Diarrhœa*.

Theſe Inſtances of the Cure of the ſeveral *Species* of a *Diarrhœa*, are ſufficient to ſhew which of the Kinds are, in their own Nature, moſt incurable; and as the Difficulty in the Practice is the ſame we found formerly, when I inveſtigated the *Nature*, and *Cauſes* of a *Diarrhœa*, the Diſtinctneſs of my Account is very manifeſt.

Theſe Obſervations are not the hundredth Part of thoſe I have made in *London*, nor the thouſandth Part of the Experiences had of my Medicine at Sea. So that I do not draw them forth, as Proofs of the Goodneſs of my Medicine, but as an Illuſtration of the different Degrees of Curableneſs there is in one *Diarrhœa*, and another. Had I any other Deſign, the World would equally be ſurprized with the Greatneſs of the Cures, and the Boldneſs of an invidious Inquiry that was once made into the Succeſs of my Medicine; which, as I had Men of great Honour for my

my Judges, turned hugely to the Advantage and further Esteem of the Medicine. However it may not be disagreeable to hear of two Practices of two Surgeons, then in the Navy.

The first is a Letter from the Surgeon of the *Flamborough* at *Dublin*. The Surgeon, Mr. *Rivet*, pretended that the Ship's Company was very much afflicted with a *Diarrhœa*, which must have proved very fatal, but for my *Electuary*; and therefore desires a Supply of it to be sent him forthwith. I laid his Letter before the Lords of the Admiralty, and their worthy Secretary, Mr. *Burchett*, ordered him this Supply, which was sent him, which he received, and which was very profitable to him. For Mr. *Rivet* got above four hundred Pound for the Cures he did in *Dublin* by four Pounds of my *Electuary*.

The second is a Letter from the Surgeon of the *Revenge*, to Captain *Cleasby* who commanded that Ship. For after the malicious Inquiry, I lately hinted, the Lords of the Admiralty had ordered the Captains, after returning home, to give an account of the Success of my Medicine in their foreign Voyages. Among the rest of those Letters, is one from Mr. *Borthwick*, wherein he gives an account of the Men cured of Fluxes by the Medicine, and how suddenly they were cured. Then he adds an Observation he had made formerly in

Brazil. When, ſays he, I was at *Bahaja de Todos*, with Captain *Dampier*, in her Majeſty's Ship the *Roebuck*, he deſired me to viſit one Mr. *Abraham Jones*, Merchant. When I ſaw him, he was lying a Bed ſo weak, that he was not able to help himſelf any Manner of Way.

He told me that he had an hundred Stools, and ſixty Vomits, in forty eight Hours. His Pulſe being very low, I gave him a little Cordial, and ſome of Doctor *Cockburn*'s anti dyſenterick *Electuary*, and by the Uſe of the *Electuary*, he was ſo throughly cured in ſeven Days, that he was able to walk abroad, and was alive when the *Woolwich* was at *Brazil.* It is worth its Weight in Gold. The laſt part he, afterwards, told me he had reaſon to affirm, becauſe he got forty times the Weight of the Medicine for his Cure.

I might relate the great Efficacy of my Medicine for curing Fluxes in the *French* Navy. But I proceed.

CHAP. VIII.

Of a LIENTERY, *and of a Cœliack Affection.*

HAving, in the foregoing Inquiry into the Nature of a *Diarrhœa*, ſo fully diſcovered the Nature of a *Looſneſs*,

neſs, and particularly that of a *Diarrhœa*, I hope any other Species of a *Looſneſs*, hereafter falling under our Conſideration, will be more eaſily explained, by what has been ſaid in the mentioned Inquiry. The *Lientery*, more eſpecially, has been conſidered as a *Symptom* of the *Diarrhœa*; and, without doubt, that Account will become more manifeſt, after the particular Inquiry I am about to make of that Diſeaſe.

The *Lientery*, and *Cœliack* (or Stomach) *Affection*, are Diſeaſes wherein our Aliment has undergone ſome Change in the Stomach, or none at all. If our *Food* paſſes out of the *Stomach* without any Degree of Concoction, *Hippocrates* [a] calls the Diſeaſe a *Lientery*. *Cornelius Celſus* and [b] *Galen* call it a *Palſy*; and ſome *Latin* Authors, a *Slipperineſs* of the *Guts*. But if our *Aliment* has undergone any Degrees of *Concoction*, the Diſeaſe then is known by the *Cœliack*, or Stomach *Affection*; and the Sick, by *Cælius Aurelianus*, are called *Ventriculoſi & Ventroſi*. *Pliny* calls them promiſcuouſly the *Cœliack* Affection: [c] *Rabbi Moyſes*, *The Diſeaſe of the Stomach*; as did almoſt every *Arabian* Phyſician. Some have called the *Lientery* and *Cœliack Affection* a *Flux* of the *Stomach*, or, a *Stomach-Flux*.

[a] Lib. de Affect. pag. 536. [b] vi. Aph. i. & iv. Aph. 12. [c] Aphor.

Aretæus,

Aretæus, and many other Authors, have conſidered a *Lientery* as a Symptom that happens in the Courſe of a *Dyſentery*. But *Galen*, and other very learned Authors, make this Difference between the *Lientery* and *Stomach-Flux*; that in the former, the *Food* is thrown out of the Body without any conſiderable Change being made upon it in the Stomach; and, in the laſt, the Food is more or leſs concocted, as I have already obſerved.

This is the conſtant Appearance of the *Lientery* and *Stomach-Flux*, manifeſt to the Obſervation of all ancient and modern Phyſicians, and was never queſtioned, till the *Geneva-Reformers* of that excellent practical Author, *Lazarus Riverius*, did it, with equal Diſreſpect to all Phyſicians, as Diſregard to that learned Author; *for it is not to be believed* (ſay the *Geneva*-Phyſicians) *whatever* Riverius *and the Ancients may alledge, that the Food can, abſolutely ſpeaking, be thrown out of the Body altogether unconcocted, ſince it is impoſſible* (as they wiſely argue) *that it ſhould paſs through the Stomach and Inteſtins without being changed*: But why? *becauſe of the Gall and pancreatick Juice that are dropping into the Duodenum, and which cannot fail to make ſome conſiderable Change on the Food.* But all that this Argument proves, is, that the Reformers of *Riverius* were not Men practiſed in Phyſick; for the *Food* not only

only paſſes the *Stomach* and *Inteſtins* unconcocted in the *Lienteria*, but in every violent *Diarrhœa*, as I have formerly ſhewn; as alſo when Men are very ill of a *Dyſentery*, as is known to Phyſicians, and will hereafter be conſidered. The pretended Reformers, then, of the great *Riverius*, moſt unwiſely find fault with a very notorious and obvious Fact, deſcending through every Age, without ever being contradicted, under the Obſervation of the moſt judicious Phyſicians in all thoſe Times. But the precarious Reaſoning of the Reformers of *Riverius* will ſpeedily be ſhewn equally abſurd, as it is precarious; altogether unfit to ſhake any, the ſlighteſt, Obſervation.

Their Error, about the *Cœliack Affection*, is no leſs a manifeſt Proof of the want of Experience, and Practice, in Phyſick, in the Reformers of *Riverius*, than was the former, when they corrected their learned Author in the fore-mentioned Caſes of a *Lienteria*. Is there any Caſe more common than the State of the Chyle, when Men are ill of the *Jaundice?* And if the Chyle, and white Excrements, can paſs pure in a Diſeaſe infinitely more common than the *Cœliack* Affection is, why ſhould theſe Reformers of *Riverius* deny their Belief of the Chyle paſſing in its native Colours, without its being neceſſarily changed in this its Paſſage? But all this

this falſe Reaſoning proceeds, altogether, from the Diſability of ancient Phyſicians of aſſigning the true Cauſe of this Diſeaſe; and tha tmodern Phyſicians have pertinaciouſly followed their Steps, without making uſe of the modern Improvements, that were unknown to the ſagacious, and learned, Phyſicians in former Times.

Our Curioſity will be raiſed to make further Inquiries, by rehearſing the modern Opinions about the Cauſe of this Diſeaſe, as they may be found among our lateſt Authors, and even among ſome of thoſe who have made uſeful Diſcoveries in *Anatomy*; which Knowledge they have employed in ſuch a Manner, as to qualify them to give us a clearer Light into the Nature of this Diſeaſe. Ancient Phyſicians, as I have already obſerved, imply in their Deſcriptions of a *Lienteria*, the great Weakneſs of the Stomach; upon which Account it can neither retain, nor digeſt the Food, that is ſent into it.

Fernelius, and a great Number of Phyſicians that follow his Opinion, tell us, that a *Lienteria* is occaſioned when the Stomach neither digeſts, nor retains the Food. Thus far they agree with their Anceſtors, but the Deſcription and Nature of a *Cœliack Affection* given by this Author, have been generally followed by every Author. [a] The *Cœ-*

[a] Pathолog. lib. vi. cap. x.

liack

liack Affection, says *Fernelius*, is occasioned by the *lacteal Vessels* being obstructed, and that the Chyle, for that Reason, is unduly distributed.

[b] *Ballonius* thinks that the *Mesentery*, and its *Glands*, being obstructed with gross and viscid Chyle, produces the *Cœliack Affection* more particularly; nay, that Tumours on these Parts are very commonly the Cause of this Disease.

That excellent Anatomist [c] *Conradus Peyerus* ascribes the quick and extraordinary Discharge of white Stools in the *Cœliack Affection* to the Glands of the Guts being looser, or to their being too close; and brings some Examples of morbid Dissections, in order to support his Opinion.

There are some Authors [d], who have called in Obstructions of the *Liver*, *Spleen* and *Pancreas* to make their Account of the *Lienteria*, and *Cœliack Affection* more compleat.

In order then to determine something positively, and to settle some Certainty in the various Opinions we find among all Authors, I will pursue the Method I have already taken with so great Success, and endeavour to find, by the *Diagnostick* Signs, the

[b] Epidem. [c] De Gland. in. [d] Sylv. lib. i. test. Usu & Aff. cap. xvi.

Nature and Cauſe of the *Lientery* and *Cœliack Affection.*

In the LIENTERIA, *Hippocrates* informs us, as I have lately obſerved, that the *Food is thrown off unmelted, unputrify'd, or unconcocted.* In the *Cœliack Affection the Food comes off under ſome Degrees of Concoction:* and [a] *Paulus Ægineta*, that in this laſt Kind of Slipperineſs of the Guts, the *Food runs thro' moſt ſpeedily; tho' the Crudity is ſo very great, that the Kind of Food may ſtill be diſcerned.*

[b] *Diocles* has left us this excellent Obſervation (little heeded by other Phyſicians) *that People are commonly afflicted with the* LIENTERY *and* STOMACH-FLUX, *ſoon after a Meal, and very rarely at any other time; which Evacuation never ceaſes while there remains any of that Meal in the Stomach and Inteſtins.* This Obſervation is ſo material, and of that Conſequence, in explaining and diſtinguiſhing this Diſeaſe from a Symptom of the *Diarrhœa*, and of the *Dyſentery*, that it is ſurpriſing, how this notable and diſtinguiſhing Symptom has been overſeen by his Predeceſſors, and neglected by his Poſterity, in Phyſick. But *Cornelius Celſus*, the *Latin Hippocrates*, gives us an Account of the *Cœliack Affection*, very different from what has been taken from all

[a] Lib. iii. cap. iv. [b] Curatio & Cauſa Paſſionis.

other Authors. [c] The *Cœliack Affection*, according to this elegant Author, *is ſeated in the Pylorus, or Gate of the Stomach. In it the Stomach ſwells and is painful; the Belly is altogether bound, and does not ſo much as paſs Wind. The extreme Parts of the Body are cold, and there is a Difficulty of breathing attends this Diſeaſe.*

This Account of the *Diagnoſtick* Signs being premiſed, we muſt, in the next Place, diſcover how they are produced; for thereby we may be led into the *Nature* and *Cure* of the *Lientery* and *Cœliack Affection*; the firſt whereof is hitherto unknown, and the laſt reputed far more difficult and various than that of a *Diarrhœa:* And from both theſe Defects flow all the various Opinions, and different Obſervations, that are to be met with in every Book of Phyſick.

But to begin with the *Lientery*, wherein the Food paſſes through the Sick without any Marks of Concoction; which Obſervation is explained without any great Difficulty, by recollecting what is already ſhewn in the *ſecond* Chapter of this Book; for in it we are taught by what means our Aliment is naturally concocted in the Stomach, and how the ſame Aliment paſſes out of it, chiefly by acquiring a liquid Form. It is then

[c] Lib. iv. cap. xii.

very

very manifeſt, that no Property, nor Affection of the *Guts* is wanting, when a *Lientery* is produced; and as the Surface of an human Stomach is always ſmooth, there is no *Slipperineſs* of that Part required, in order to our having a *Lientery*.

Now as the *Lientery* proceeds from ſome Error and Defect of concocting of the Stomach, we may with Certainty be informed of the Nature of a *Lientery*, by diſcovering this Error, or theſe Errors and Defects, in the *Stomach*, when the Food paſſes out of it *unconcocted*. We may likewiſe become apprized of our general Defect, if we recollect, again, what has been ſhewn, in the *third Chapter* of this Book, that every Looſneſs is produced by ſome *Cauſes* that *ſtimulate* the *Stomach* and *Inteſtins*, or that increaſe the Liquidity of thoſe Things that are commonly contained in them: Upon which Concluſion, every Symptom and Cauſe of a *Diarrhœa* were formerly, with great Evidence, explained. And therefore it is very manifeſt, that every ſtimulating Subſtance in the Stomach will occaſion the *Food* to be more or leſs readily thrown out of the Stomach, as is the Degree of the Stimulus, and the proper Diſpoſition of the Stomach to be ſtimulated by theſe ſharp Subſtances, lodged in it. Hence it is that we found the *Food* often carried out of the Stomach *unconcocted*,

in

in the Time of a *Diarrhœa*; or when a *Lientery* attended a *Diarrhœa* as its Symptom. In that Caſe the Diſcharge of unconcocted Food might be at any Time, Night or Day, while any Part of the Food remained in the *Stomach*, or *Inteſtins*, becauſe it followed the Condition and Courſe of the *Diarrhœa*. But, as *Diocles* has excellently well diſtinguiſhed the *Lientery*, an eſſential Diſeaſe, from the *Lientery*, when it is a Symptom of a *Diarrhœa*; and has informed us, that the firſt begins ſoon after our Meal, and perſiſts till the whole, or the greateſt part of it is evacuated; we may hope to find among the Cauſes of this Diſeaſe, aſſigned by Authors, ſuch as are ſufficient to create this Stimulus, becauſe this is the immediate Defect in the Stomach, and its Contents, ſufficient to produce and occaſion the *Lientery*.

On the other Hand, as the *Food* is never duly *concocted*, nor turned into *Chyle*, in any Part beſides the *Stomach*; ſo it is evident, that the Stomach concurs very little, or nothing at all, in the *Cœliack Affection*, or when the *Chyle* goes through the Sick, and paſſes off in their *Stools*; but the Defect which occaſions the *Cœliack Affection* muſt be found in the *Guts*, and not in the Stomach; which has finiſhed its

Work, when the Food has been turned into *Chyle*.

This Defect of the *Chyle* not paſſing out of the Guts by the Lacteal-Veſſels, is very obvious from what has been ſaid in *Chap.* II. for if the *Chyle* is not further diluted by the *pancreatick Juice*, the Gall, and other thin Liquors ſeparated from the *velvet Coat*, and ſome *Glands* in the Guts, it is naturally too thick to paſs into the *Blood* by the *Lacteals*; and muſt, therefore, be driven along the Guts, and out of them, by their natural and periſtaltick Motion; as has been further ſhewn in *Chap.* III. But if we ſuppoſe that the *Chyle* has acquired any Degree of Sharpneſs, while it is under this Ineptitude of being driven into the *lacteal Veſſels*, this *Sharpneſs* will ſtimulate the *Guts*, and occaſion a quicker Diſcharge of the Chyle; on both which Accounts of its Thickneſs and Sharpneſs, the Chyle, unmixed with other Liquors of the *Guts*, is driven out frequently, and in its own Colour; or, there is a *Cœliack Affection*.

The greateſt Number of Phyſicians, notwithſtanding the manifeſt Paſſage of the *Chyle* out of the *Guts* into the Blood, have followed the Opinion of ancient Phyſicians, who thought that the *Chyle* was barred from mixing with the Blood in the *Guts* by the *Meſaraicks*; and that by the *Guts* being

full of *Scars* after a *Dyſentery*, and other *Diſeaſes*, which on that Account finding no Paſſage into the *Blood-Veſſels*, was ſuppoſed to be driven out of the Body, and to conſtitute the *Cœliack Affection*. The Sufficiency of this alledged Cauſe will hereafter be examined. In the mean time, if the *Guts* were all of them full of *Scars*, (as they muſt needs be in the preſent Suppoſition) the Diſcharge of *Chyle* could not be quickly made, however its Colour might remain, which is contrary to the common Obſervation and Experience Phyſicians have of the Courſe of this Diſeaſe; for the *Guts* being *Callous*, with that great Number of *Scars*, could not be duly contracted, nor the *Chyle* protruded, as is neceſſary, to agree with Experience.

Franc. Deleboe Sylvius forſaking this common Opinion, is not more happy in giving us an Account of the *Cœliack Affection*; [a] for he calls this State and Condition of the *Chyle*, when it has not paſſed into the *Lacteals*, an *Icteritious Looſneſs*, or *Jaundice*; and afterwards, in ſome confuſed unintelligible Words, he conſtitutes a *Chylous Looſneſs*. But as the Stools are moſt commonly white, when a Man is ill of the *Jaundice*; yet they are neither commonly

[a] Prax. lib. i. cap. xiii.

looſe, nor do they happen under the Circumſtances of a *Cœliack Affection* when they are looſe, and are called either a *Jaundice*, or *Chylous* Looſneſs, in the Language of *Sylvius*. On the other Hand, here is a *Cœliack Affection* without the *Jaundice*; ſo that the Jaundice is neither the Principal, nor a Symptom of the former Diſeaſe; and therefore this Analogy of the learned *Deleboe Sylvius* is very defective and imperfect.

But however imperfect this Account of *Sylvius* now appears to be, and though it neither tends to give Phyſicians a better Notion of a *Cœliack Affection*, nor to ſuggeſt better and more natural Means of curing it; yet the Reformers of *Riverius* readily adopt it, to the Ruin of a Fact conveyed by their excellent Author, upon the Credit of all ancient Phyſicians, as well as confirmed to him upon his own Experience. *There is*, ſay the Reformers, *a third Species of this Diſtemper, which by no Means can be reduced to any of the former*, (the *Lientery* or *Cœliack Affection*) *yet may very properly be called a* Chylous Diarrhœa. *This happens when the Food has been duly concocted in the Stomach, and further perfected in the Duodenum, but is afterwards thrown off with the Stools, the Chyle not paſſing into the Lacteal Veſſels, becauſe they*

are

are in ſuch Caſes obſtructed. Now let the Reformers of that excellent Practitioner, *Lazarus Riverius*, think this a Species diſtinct from the *Lientery* and *Cœliack Affection*, yet we ſee the Account they give of this new Species is the very ſame *Riverius* had given of the *Cœliack Affection*; and therefore this pretended new Species has much of Novelty, but nothing of Truth in it. The *Reformers*, after having copy'd *Sylvius*, ſay the ſame that I have now obſerved; for they add, that *we reduce this laſt Species, and the other two, into one, becauſe of the Likeneſs and Similitude of the Subſtances voided in both Caſes*, this new Species, it may be ſuppoſed, and that of the *Cœliack Affection*. This Contradiction does not hinder their making a fourth *Species*, in Imitation of *Sylvius*, tho' that is as uſeleſs as the third we have been conſidering, and ſhall, for that Reaſon, be left without any farther Examination.

This unaccountable branching out the various Symptoms of a Diſeaſe into ſo many Species of it, can never be to any good Purpoſe, and tends only to breeding Confuſion. For Inſtance, this Diviſion made by *Sylvius*, of a *chylous Diarrhœa*, was formerly conſidered by me purely as a Symptom of a *Diarrhœa*, when, in the impetuous Courſe of the Diſeaſe, the *Chyle*, and other

Contents of the *Guts*, were carry'd off in the common Torrent, and what required no particular Conſideration to be had to this Symptom, in the Cure of the *Diarrhœa*. Whereas, were theſe Symptoms as many Species of the Diſeaſe whereof they are Symptoms, they muſt be produced by as many different Cauſes, which require as diſtinct Intentions of curing every Species, as there are ſuppoſed Species, and as they can be combined one with another. In this Caſe nothing but Confuſion can ariſe. *Junckerus* is a notable Example, as well as a Regiſter, of ſuch numerous Diviſions, who has no leſs than eleven different Species in his [a] Tables publiſhed from Dr. *Stahl*'s Lectures, and may be called Dr. *Stahl*'s, who likewiſe writes a Preface to them. Now as theſe different Species muſt make as many more as they can meet with one another, the Conſiderations ariſing from that Number are vaſtly various and perplexing; giving Occaſion to the greateſt Confuſion. On the other Hand, we find the Nature of the Cœliack Paſſion left in the ſame State the Reformers found it in their Author, the Ineptitude and Inability of the *Chyle* paſſing into the *Meſaraick Veins*, becauſe of the univerſal *Scars* made in the *Guts* after the *Dy-*

[a] Tab. 83. Halæ 1718.

ſentery,

ſentery, and other *Diſeaſes*. Thus have they mended, improved and reformed that excellent Syſtem of *Riverius*.

After all I have ſaid, we find one of the undoubted Chiefs in Phyſick giving a very different Account of the Lientery from that I give with Conſent of all other Authors. The great and elegant *Corn. Celſus* is ſo far from admitting any manner of *Looſneſs*, in the Caſe of a *Lientery*, that he tells us, People, in that Condition, are under great *Conſtipation*, and Coſtiveneſs in their Belly; an Account widely diſagreeing from other Phyſicians, and which is one Reaſon, why ſome Phyſicians have alledged, that the great *Celſus* was more a painful Studier of the *Greek* Phyſick, more the *Latin Hippocrates* by his accurate Style, and following that Author, than from the Accurateneſs of his own Obſervation. But, without doubt, *Celſus* was a Perſon of Experience; for no Man can ever deſcribe a Diſeaſe, and the different Circumſtances of curing it, in the manner *Celſus* has done, without being a Perſon of great Judgment, with all neceſſary Experience. However, as this Difficulty will come more naturally to be reconciled, when the *Cauſes* of theſe Diſeaſes are to be ſettled, I leave this Opinion of *Celſus* to that Place.

Having thus discovered the Nature of a *Lientery* and *Cœliack Affection* by their most essential and principal Symptoms, I proceed in the next Place, to account for, and explain, the other Symptoms that have been commonly esteemed equally principal with the former; and are, therefore, proper to be examined and explained.

The Diseases, the Subject of our Discourse, are attended with *Faintness*, *Paleness*, a *Tympanites* and the *Jaundice*. *Paulus Ægineta* says, that [a] *the Food is soonest thrown off in a* Cœliack Affection. There is a great *Heat* in the *Hypochondres*, and a great *Decay* of *Flesh*.

This Observation of *Ægineta* is now become a self evident Truth, from every thing that has been hitherto said of any *Loosness*; for the Stools in the *Cœliack Affection* being vastly thinner than natural Stools, and still thinner than in the Case of a *Lientery*; in the *Cœliack Passion*, then, whatever may be the *peristaltick* Force of the *Guts*, the Food must be thrown off in Stools sooner, than it is when a Man is ill of a *Lientery*, as *Ægineta* observes; and that, because the Thinness it self of the Stools, renders them more ready and apt to be thrown out of the *Guts*, whatever be the

[a] Lib. iii. cap. iv.

State

State of the *periſtaltick* Motion of the *Guts*, whereby the Stools are expelled.

But, while the *Looſneſs* of a *Lientery* and *Cœliack Affection* proceeds and ſubſiſts, Phyſicians have obſerved their Sick to complain of a very great *Heat* in the Region of the *Hypochondres*, a Symptom that is not taken notice of either in the *Diarrhœa*, or even in People ill of a *Dyſentery*. I know that ancient Phyſicians comprehended in the Region of the *Hypochondres* all that Space that is between the *Cartilago enſiformis* and *Ileum*, or all the lower Belly, and whatever is contained in its Cavity. If then we conſider the preſent unnatural Diſcharge of our Food, and the real Fermentation we find there is in the Stools that are voided, we may readily conceive this extraordinary *Heat* in the *Hypochondres*: But as all theſe Circumſtances of Excrements are truly no more than what we found in the Caſe of a *Diarrhœa*, where no ſuch *Heat* was diſcovered, there muſt either be ſome other *Cauſe* of this *Heat*, that can it ſelf produce it, or that concurs, at leaſt, in producing this extraordinary Effect.

This Cauſe, I think, may be found by what has been ſaid more particularly concerning the Nature of the *Cœliack Affection*. For as the *Chyle* is chiefly voided in Stools, by its not being diluted with the

the Liquors, it ſhould meet with, in the Guts; ſo, on whatever Account theſe Liquors are not ſecreted, (whether that be any Unfitneſs in the Blood, or any Defects in the Glands) there is an Inflammation of the *Guts*, that neceſſarily attends theſe Defects, and commonly a greater *Heat* without any *Inflammation*. And therefore, the *Heat* of the *Hypochondres* being augmented, an eſſential Circumſtance of the *Cœliack Paſſion*, it is manifeſt, why the Heat of the *Hypochondres* becomes ſenſible and grievous in the *Looſneſs* of a *Lientery*, and *Cœliack Affection*.

That after this undue Concoction in the Stomach, and this unnatural Evacuation that is made when the Food is more duly concocted, there ſhould be a great Decay of the Fleſh of the Sick of a *Lientery* or *Cœliack Affection*, is not to be wondred. For the Purpoſe and Deſign of Food is to ſupply the neceſſary Waſting and Decay of the Blood. If then the Blood goes on in a decaying State, greater than the Recruits that are ſent into it, this Decay muſt become very ſenſible: But the Decay of Blood is the Decay of Fleſh, becauſe the Quantity of *Fleſh* is proportionable to the Quantity of *Blood* in the *Blood-Veſſels* of every *Muſcle*; and the Decay of Blood becoming very ſenſible, and that becauſe the Food (the Recruiter

of

of Blood) is carryed out of the Body in a *Lientery* and *Cœliack Affection*, ſo muſt the Decay of Fleſh be. And therefore in a *Lientery* and *Cœliack Affection*, there is a great Loſs and Decay of Fleſh.

It is a Conſequence of this great Decay of *Blood*, and of its being unduly recruited by the Food (which is carried off another Way) that People ill of a *Lientery* and *Cœliack Affection* are *faint*. For *Faintneſs* is a Decay of Blood, or of its Spirits, to that Degree, that the *Heart* can hardly be contracted; inſomuch that the Fears, and a Feeling of immediate *Death*, affect the ſick Perſons, who are often relieved with any ſpirituous Draught, or Medicine, which proves a Supply to the great natural Want, for ſome Time, and prevents the falling down of the Sick, and their *fainting*.

The Quantity of Blood, and of its Spirits, being vaſtly leſſened, in time of the *Lientery* and *Cœliack Affection*, the Strength of a Perſon is not only impaired, even to fainting, but his Colour is *pale*; becauſe the Colour of any Perſon is as the Quantity, and Fluidity of his Blood, the Thinneſs of the *Scarf-skin* being equal. Now the Quantity and Fluidity of the Blood being leſs than natural, the *Blood-Veſſels* are not ſufficiently filled, and that only with groſſer Blood; but the *Blood-Veſſels* being not diſtended

tended with Blood, there does not any thing ſhine through the *Scarf-skin* beſides the dead Colour of the Veſſels themſelves, and the Perſon is *pale* to any Degree, even to the Colour of a *dead* Perſon, and that in Proportion to the Quantity and Thickneſs of Blood. But as much of this Paleneſs may be owing to the State of the Blood-Veſſels of the *Scarf-skin* it ſelf, all theſe Effects will be more ſudden and obvious on that Account.

From the ſeveral Degrees of this Way of affecting proceed the *Bloatedneſs*, the *Wrinkles* and *Dirtineſs* of the Belly and *Skin*, *&c.* mentioned by phyſical Authors as the Attendants of the *Lientery* and *Cœliack Affection*; but what I do not think neceſſary to ſearch further into, becauſe they are Symptoms not peculiar to theſe Diſeaſes, and are common in *Conſumptions*, and in many other Diſeaſes, as well as in the *Lientery*.

To proceed then to the Conſideration of other Symptoms that may more properly follow the *Lientery*, or the *Cœliack Affection*, we find a *Tympanites* among the firſt of that Number; though it would be impoſſible to deduce that Symptom from any Circumſtance of the mentioned Diſeaſes, eſpecially, if we admit of the Account Authors give of a *Tympanites*, or of the *Cœliack Affection:* Becauſe by their Account there does not appear to be any Relation between

tween the Diſeaſes and their Symptom. But on the other Hand, as the Fact of a *Tympanites*, often ſucceeding a *Lientery* or a *Cœliack Affection*, ſeems to be conſtant, and related by Authors as a conſtant Fact; we muſt further inquire into the Poſſibility of this Fact, after the Diſcoveries I have made of the Nature of the *Lientery* and *Cœliack Affection*.

By a *Tympanites* Phyſicians underſtand that Kind of *Dropſy*, wherein the *Abdomen* is ſo ſtretched and diſtended, that it does not yield to any Compreſſion, nor receive any Impreſſion, and gives a Sound ſomewhat reſembling the Sound of a *Drum*; from which analogous Diſtention, and giving this Kind of Sound, the Diſeaſe plainly takes it Name. Moreover, Phyſicians unanimouſly believe, that this Diſtention of the Body is made by the *Guts*, which they ſuppoſe to be blown up with *Air*. Now, as I lately aſſerted, it will be hard to ſhew, how this extraordinary Quantity of Air ſhould be bred by a *Lientery* or the *Cœliack Affection*; and far more that this Air has a Power to blow up all the *Guts* and the *Peritonæum*, and *Muſcles* of the *Abdomen*, which reſiſt and oppoſe ſuch an Inflation: But this Power of Air is ſtill more ſuſpected in the time of a *Looſneſs*, when the Air has ſo free a Vent by the *Anus*.

And therefore, if we recollect what has been already ſhewn, about the Nature of the *Cœliack Affection* more particularly, we may find the Affinity there is between it and the *Inflammation*, and *Inflation* of the *Guts* in a *Tympanites*; and conſequently, we may diſcover why a *Tympanites* often follows the *Cœliack Affection*.

We have lately diſcovered that the *Cœliack Affection* chiefly conſiſts in this; that the Chyle is not mixt with the *Gall* and other Liquors in the *Guts*, as it ſhould be naturally; and, on this Account, that it is unfit and incapable to paſs into the *Lacteal Veſſels*, but paſſes out by the *Anus*, the common Courſe of the Excrements. But by this great Deficiency of *Secretion* in the *Guts*, they are not only ſubject to be inflamed from the common Cauſe of this Defect of *Secretion*, but they are likewiſe inflamed for the want of *Mucus* that covers the great *Guts* eſpecially, and are thereby ſtimulated by every ſharp Liquor, or other ſharp Subſtance, that paſſes along in them. Thus we ſee how the *Guts* are *inflamed*, in the Courſe and Continuance of the *Cœliack Paſſion*; and we may eaſily become apprized how they are *inflated* by the Means of this previous *Inflammation*. For when the *Guts* are inflamed to a conſiderable Degree, they loſe their periſtaltick Motion, which is their Power,

Power, whereby every thing contained in the *Guts*, is thrown out of them. Now as the periſtaltick Force of the *Guts* is diminiſhed and deſtroyed, by their being inflamed; ſo every thing that is in the way of diſtending the Guts, and can inflate them, cannot fail of having that Effect, and that reſpectively, as are the two contending Powers of *inflating*, and of the *Guts* contracting themſelves by the periſtaltick Contraction of their muſcular Fibres. Air is the moſt common and inflating Subſtance in Nature, and every Body is ſenſible, that a great abundance of *Air* is always in the *Guts*, but more eſpecially, when the *Food* is ill concocted. And therefore, in the Time of a *Cœliack Paſſion*, the *Guts* being at that time full of *Air*, emitted from the ill-concocted *Chyle*, and that they are then alſo *inflamed*, a *Tympanites* eaſily follows the *Cœliack Paſſion*. Moreover, if we conſider how eaſily an inflamed Part communicates this Affection to the other contiguous Parts, we ſhall eaſily perceive how this *Tympanites* is favoured by the *Cœliack Affection*. The *Cawl*, as well as the *Muſcles* of the Lower Belly, are waſted by the *Cœliack Affection* perſiſting, and the *Inflammation* of the *Guts* is eaſily communicated to the *Peritonæum*, which loſing its elaſtick Power, is very eaſily puſhed up and diſtened by the inflated *Inteſtins*;

tins; and thereby the Lower Belly becomes tight, and gives ſome ſmall Sound like a *Drum*, and actually forms the *Tympanites*.

This Account of the *Tympany*, and the Relation it has to the *Cœliack Affection*, is altogether ſo new, that many Phyſicians, unacquainted with the Symptoms of the *Cœliack Affection*, and of the *Tympany*, will find it difficult to be apprized of the full Notion and Explanation here given; however evident and obvious it muſt appear to ſuch as have conſidered the Nature of the *Cœliack Affection*, lately diſcovered. But this Explanation will become more undeniable, if we conſider that the *Tympany*, very commonly, by the Obſervation of the beſt Phyſicians, follows habitual *Colicks*, which it can only do upon the Account of the great *Inflammation* of the *Guts*, that is well known to be very common in Caſes of violent and repeated Fits of the *Colick*, and the *Inflation* of them by the Air contained in the *Guts*. And therefore as a *Tympany* very often follows habitual *Colicks*, and that becauſe of the great Inflammation that is commonly of the Guts, in time of that Diſeaſe; ſo we muſt eaſily be perſuaded, that the *Tympany*, that ſucceeds the *Lientery* and *Cœliack Affection*, is produced by a like *Inflammation* and *Inflation* of the *Guts*.

When

When we have conſidered this great *Inflammation* and *Inflation* of the *Guts*, and the Preſſure they make on all the neighbouring Parts; the *Jaundice*, another Symptom of the *Lientery* and *Cœliack Affection*, becomes very manifeſt; and as this Symptom is a very common, and a very deſperate Symptom in a *Tympany*, that follows habitual *Colicks*; ſo we may very naturally conclude, that it is owing both in *Colicks*, and in the *Cœliack Affection*, to the *Tympany* that is a Symptom of, and ſucceeds, thoſe Diſeaſes.

But to render this Preſſure, made by the diſtended *Inteſtins* upon ſuch neighbouring Parts that concur to make the *Jaundice*, more obvious; we muſt conſider what Effect the *Guts* in this Circumſtance may have on diſcharging the *Gall* into the *Guts*, or in hindring its Paſſage out of the *Gall Bladder*, or towards the *Guts*; for when the *Gall* is not diſcharged into the *Guts* by this their Inflation, it returns into the Blood, and flowing with it, gives the yellow Colour to the *Skin* and *Eyes*, which is the determining Symptom, of any Perſon being ill of a *Jaundice*, to Phyſicians. And therefore, as the *Jaundice* is a Diſeaſe, which is not the Symptom of the *Lientery* and *Cœliack Affection*, but of the *Tympany* their Symptom, and denotes only the

great Length to which these Diseases have proceeded, when a Person in the *Lientery* and *Cœliack Affection* has likewise the *Jaundies*; I will very briefly shew how the *Jaundies* are formed by the Distention of the Guts in a tympanitical State.

In order to set this in its true Light, it is needless to be very particular in any Account of the *Situation* of the *Liver*, which is the Origin of the *Gall*, by having the *Gall* separated there out of the hepatick Artery, and conveyed from thence by proper excretory Canals to the *Bladder*, which is its *Reservatory*. We will only take a general View of the mentioned Parts, as well as of the common Channel of the *Gall* into the *Duodenum*; for that will sufficiently inform us of the forming the *Jaundice* in the present Case, as I proposed. The *Liver* is situated in, and fills, all the right Hypochondre, and runs over the right Part of the *Stomach*, even beyond the *Sternum*. The lower Side of the *Liver* is concave, and in one of its *Sinus's*, towards the left Side of it, are contained the right Side of the Stomach, together with the *Pylorous* and the Gut *Duodenum*; in another *Sinus* towards the Edge of the Liver, on its right Side, is the *Gall-Bladder*, from which proceeds the *common Duct*, or Canal of the Gall; which bending downwards is inserted obliquely into

to

to the *Duodenum*, four or five Inches below the *Pylorus*. From which Account it plainly follows, that the Motion of the *Gall* into the *Duodenum*, is interrupted by the Inflation of that *Gut*, not only by its compreſſing the common Conveyer of the *Gall*, but alſo by changing its Direction where it is inſerted into the *Duodenum*, and thereby the *Gall* is either not at all diſcharged, or that Diſcharge is greatly impeded, and that by the Diſtention of the *Duodenum*, and in proportion to the Duration, as well as the Degree, of that Diſtention, which was neceſſary to be ſhewn.

Moreover, the Diſtention of moſt of the *Guts*, more or leſs compreſſes the common Duct; but as the *Colon* makes the greateſt Variety of Turnings and Windings of any other, ſo it is moſt liable to compreſs all the concave Part of the *Liver*, and hinder the free Paſſage of the *Gall* into the *Duodenum*. Beſides, the *Colon* is ſometimes tied to the *Gall-Bladder* it ſelf, and muſt needs change the Situation of it, when the *Colon* is inflated: For the *Colon* leaving the *Cœcum* is joined with it to the right *Kidney*, and thereafter winds upward to the *Liver*, where being tied to the *Gall-Bladder*, as I have already obſerved, is dy'd with the Colour of the *Gall*; and therefore when the *Colon* is inflated, the common Channel of the *Gall* is compreſſed,

but the Situation of the *Gall-Bladder* it ſelf is changed, and the Derivation of the *Gall* into the *Duodenum* is interrupted, and occaſions the *Jaundice*, by flowing into the *Blood*; as I have already ſhewn.

However clearly this Phœnomenon, or Symptom of the *Jaundice* in the *Cœliack Affection* is explained, yet it is very manifeſt, that it is a Symptom only of a *Symptom* of the primitive and eſſential Diſeaſe, which cannot ever be a common Attendant on the *Lientery* and *Cœliack Affection*. I muſt therefore obſerve, on this Occaſion, the great Difficulty there is in collecting the genuine *Diagnoſtick* Signs of any Diſeaſe, which are abſolutely neceſſary for diſcovering the *Nature* of Diſeaſes, and in managing their *Cure*. We found great Obſcurities of this Kind from falſe Symptoms enumerated by great Phyſicians in the *Diarrhœa*; but if the Symptoms of Symptoms of Diſeaſes creep into the Number of *Diagnoſtick* Signs, this Obſcurity may often occur, and be vaſtly enlarged; much to the rendering our Inquiries into the *Nature* of Diſeaſes almoſt fruitleſs and impracticable.

Some of the Symptoms mentioned in the Beginning of this *Chapter*, and next in their Order to be explained, are of this Kind; for they do not flow directly, either from the *Lientery*, or from the *Cœliack Affection*,

Affection, and are omitted on that Account; yet they will not altogether be neglected, since they will naturally fall under our Consideration, when the *Prognosticks* of these Diseases are to be determined.

I proceed then, in the next Place, to examine, and to explain the *Causes* of the *Lientery* and *Cœliack Affection*, commonly produced and assigned by Physicians.

CHAP. IX.

The Causes of a Lientery *and of a* Cœliack Affection.

THE Causes assigned of a *Lientery* and of the *Cœliack Affection* are a *Loss* of *Appetite*, a long continued *Indigestion*, a *Pain* at *Stomach*, *purging* and *poisonous Medicines*, a *Diarrhœa*, a *Dysentery*, and *Ulcers* in the *Guts*.

Among these Causes are reckoned *cold* and unseasonable *Air*, Food that is *slippery* and *cold*, and the like, which are brought in this Case, as formerly when the *Causes* of the

Diarrhœa were aſſigned; but what do not operate in the preſent Caſe.

The Loſs of *Appetite* proceeds either from a want of that Liquor in the Stomach, that concurs to the *concocting* of the Food, or that it has undergone ſome Change from other Liquors conveyed, or diſcharged, into the *Stomach*; or elſe, that the mutual Friction of the inner Surface of the *Stomach* it ſelf is interrupted, and impeded, by a Quantity of unconcocted Food that cannot be converted into Chyle. In the firſt Caſe, the Food remaining unconcocted, neceſſarily *corrupts*, and becomes ſharp. Now the Sharpneſs and Acrimony of this unconcocted Aliment ſtimulates the *Stomach*, and makes it to contract with great Violence, and thereby the Food is thrown out of it. But we formerly diſcovered, that the Eſſence of a *Lientery* conſiſted in the Food paſſing out of a Man, without having undergone any great and ſenſible Change made on it; and as this change is naturally made in the Stomach, ſo the Food is forced out of the Stomach without this due Change made on it, becauſe of the Stomach being ſtimulated by the ſharp Parts of the Food; or by them is produced a *Lienteria*; and the Loſs of *Appetite* is truly an antecedent Cauſe of this Sharpneſs, or a Mark, at leaſt, of this enſuing *Indigeſtion*, and of the Sharpneſs that is made by it.

But

But ſecondly, if the Change made on the Liquor of the *Stomach* by a Diſeaſe, or by any other Liquor conveyed into it, which deſtroys the Appetite, or the Deſire of eating, is of that Nature as to favour the mentioned *Indigeſtion*, and this enſuing Sharpneſs; the voiding unconcocted Food will be a more ſpeedy, or a more effectual Cauſe of a *Lientery*.

This unconcocted Food remaining in the Stomach muſt certainly hinder that Friction of its inner Surfaces upon one another, which ſome Phyſicians have reckoned a principal Mean of Concoction, as well as of exciting an Appetite. But, as I have ſhewn, unconcocted Food, that impedes this Friction, muſt neceſſarily become ſharp, and thereby cauſe a *Lientery*; and this want of Appetite is a previous Step to this Corruption, which is the immediate Cauſe of the Diſeaſe.

Moreover, a long continued Courſe of *Indigeſtion* lays a new Foundation for the Defects of Indigeſtion in every ſubſequent Meal; and therefore *Cœlius Aurelianus* very juſtly obſerves, that *Lienteria* [a] *generatur ex antecedenti Indigeſtione continuâ*, &c. It is on this Account that *Proſper Martianus*, in his excellent Notes on, and Explanations of, the Works of the great *Hip-*

[a] Lib. iv. cap. iii.

pocrates, affirms, that [b] *the Eſſence of a Lientery does not conſiſt in the Food being voided without any Change made upon it, becauſe* Hippocrates *ſays, black and fetid Stools are voided.* And therefore *Martianus* conjectures, that *the Eſſence of a Lientery more particularly conſiſts in this, that the Food is diſcharged without being concocted, for as much as ſome remains of the Food, as it was taken down, are to be ſeen in the Excrements.* And *Martianus*, after relating the ſuppoſed Cauſes of the Concoction in the Stomach, adds immediately, *That however the Food is thrown off unconcocted, and whatever may be the Cauſe of the Unconcoction, yet we muſt always deem it a* Lienteria, *when the Food is thrown off before it has changed its natural Form; and that becauſe of its being corrupted, and not concocted.*

From this Account it plainly follows, that the *want* of *Appetite* is not a *Cauſe* of a *Lienteria*, and that *uncocted* Food is a *procatartick* Cauſe only, but that the *Sharpneſs* that enſues this want of Concoction is the *immediate* Cauſe of a *Lientery*, which has no Relation to, nor can concur in producing, the *Cœliack Affection*; tho' Phyſi-

[b] Prædiction. Hipp. lib. ii. ſect. ii. pag. 517.

cians

cians have commonly been of another Opinion.

The next Cauſe that is ſuppoſed to produce the *Lientery* and the *Cœliack Affection* is a *Pain*, that is ſometimes obſerved in the *Stomach* of thoſe that are afflicted with theſe Diſeaſes. But, as I have already obſerved, *Hippocrates*, and other good Authors, aſſure us, that the *Lientery* is never attended with Pain in that Part; and therefore the Cauſe does not require our Conſideration, however proper and neceſſaty it was for me to relate it, many Authors having aſſigned it as a Cauſe, and which I could not reaſonably neglect.

It may ſometimes happen, that the *Sharpneſs*, that is the true *Cauſe* of a *Lientery*, may give Pain to the *Stomach*; but then the Pain, in that Caſe, is not the Cauſe of a *Lientery*, but a very remote, and a very accidental Symptom only; which Symptoms are known to Phyſicians as Συνεδρευοντα. *Purging* and *poiſonous* Medicines are likewiſe eſteemed Cauſes of a *Lientery* and of the *Cœliack Affection*, and, on that Account, are now to be examined; that we may know how, and in what Manner, they produce any one, or both of theſe Diſeaſes. It has been formerly ſhewn how *purging* Medicines may produce a *Diarrhœa*, and may become truly a Cauſe of it; and I hope there was then

ſuch

ſuch an Account given of purging Medicines, as was not only ſatisfactory in explaining the Effect of purging Medicines in making a *Diarrhœa*, but likewiſe, that the Doctrine then diſcovered reflected ſome Light into the Nature of purging Medicines, which was not before known. We then found, that it was not ſo much the *Sharpneſs* and *Stimulus* of a purging Medicine, as another Effect and Property of it that produced a *Diarrhœa*; and at preſent, whatever Analogy may be believed to be between the Stimulus of a *Purge*, and that of corrupted Food, this will not fail to be the Cauſe of a *Lientery*, when the former can, by no Means, be any Sort of Cauſe of it whatſoever. For, ſuppoſing a *purging* Medicine of that Strength as will continue a *Looſneſs* for many Days, either directly before the purging Power of that Medicine is waſted, or by conſequence, or by a *Super-purgation*; in either of theſe Caſes, it could no more produce a *Lientery* or a *Cœliack Affection*, than a common *Diarrhœa* can do; or it could not produce any of theſe Diſeaſes; as will manifeſtly be made appear, by conſidering this very Queſtion in the Caſe of a *Diarrhœa*; which is likewiſe given for a Cauſe of the *Lientery* and *Cœliack Affection*; and which offers next to our Conſideration.

A *Di-*

A *Diarrhœa*, which is aſſigned for the Cauſe of a *Lientery*, or of a *Cœliack Affection*, muſt produce theſe Diſeaſes while the *Diarrhœa* it ſelf ſubſiſts; but the Courſe of a *Diarrhœa* widely differs from that of a *Lientery*; the firſt being the ſame *Night* and *Day*, after a Meal, or if the ſick Perſon faſts; and the laſt only follows *eating* or *drinking*, whether that is in the Night or in the Day, and would never follow the Sick, if they did not eat nor drink. It is therefore manifeſt, that a *Diarrhœa* cannot poſſibly be the Cauſe of a *Lientery*, and far leſs of a *Cœliack Paſſion*. We found, formerly, that a *Lientery*, and that a *Cœliack Paſſion* were Symptoms of a *Diarrhœa*, or that uncocted Food, and concocted Food, or *Chyle*, were carried along in the common Current of a *Diarrhœa*, and thus were its *Symptoms*; ſo the Stimulus of unconcocted Food may create ſome Degree of a *Diarrhœa*, or that a *Diarrhœa* may be the Symptom of a *Lienteria*, but never a Cauſe of it.

Was it not for a *Lientery* producing ſome Degree of a *Diarrhœa*, after this Manner, the Lientery could not properly be reckoned a Species of a *Looſneſs*, but might very well ſubſiſt without looſe Stools, as the great and elegant *Cornelius Celſus* has very juſtly obſerved; who, for that Reaſon, and that he never

never had obſerved any *Looſneſs* in Company with a *Lientery*, does not allow that Diſeaſe to be ranked in the Number of a Looſneſs.

The *Dyſentery* has a greater Appearance of being a Cauſe of the *Cœliack Paſſion*, if not of a *Lientery*, than the *Diarrhœa* poſſibly can claim, becauſe the Stimulus, which is known by the griping, is far the greateſt in the *Dyſentery*; inſomuch, that it may cauſe the Corroſion of the Blood-veſſels of the Guts, and the Diſcharge of Blood that is always in the time of a *Dyſentery*. But if the unconcocted Food, or the Food rendered Chyle, paſs off with the Stools in time of a *Dyſentery*, in that Caſe the *Lientery*, and *Cœliack Affection*, are the Symptoms of a *Dyſentery* only; nor is the *Dyſentery* the Cauſe of a *Lientery* and *Cœliack Affection*, as eſſential and original Diſeaſes.

But if we ſuppoſe a Part of the Stimulus, that was the Cauſe of a *Dyſentery*, remained after the voiding of Blood, and ſome other ill Symptoms, new cured; in that Caſe, the griping might ſtill continue a *Diarrhœa*, or appear in the true Shape of a *Colick*, neither of which Diſeaſes can poſſibly produce a *Lyentery*, whatever we may ſuppoſe their Power to be in forming the *Cœliack Affection*, and that becauſe of the Inflammation

flammation that is very common to *Colicks*, the *Dyſentery*, and in the *Cœliack Affection*, as I have ſhewn, when I inveſtigated the the Nature of that Diſeaſe. Yet if we conſult Experience, we never find that the *Cœliack Affection* ever attends any of theſe mentioned Diſeaſes. And therefore any Inflammation that is common in the *Cœliack Affection* is the Conſequence only of the Cauſes which hinder the natural Secretions at the Glands of the Guts. We may therefore conclude, that a *Dyſentery* is not a Cauſe of the *Lientery*, nor of the *Cœliack Affection.*

Phyſicians make the *Dyſentery* a Cauſe of the *Lientery*, or rather of the *Cœliack Affection*, for other Reaſons, and Conſiderations, than I have hitherto had any regard to. For, as many Phyſicians have aſſerted the *Guts* to be full of *Ulcers* in the time of a *Dyſentery*, and that an Exulceration of the Guts was an eſſential Circumſtance of that Diſeaſe; ſo in conſequence of this their Opinion, they believed that the *Guts* muſt be full of *Scars* and *Cicatrices*, when any Perſon has been cured of a *Dyſentery*, which Scars render the Guts *ſmooth*, and thus facilitate the Paſſage of the Food and Chyle out by the *Anus*, as well as impede the Paſſage of the Chyle into the *meſaraick* Veſſels, by

by the Stoppage made on their Orifice by theſe *Scars* and *Cicatrices.*

But this Kind of Argument was by many great Phyſicians rejected for being falſe, and by all ſuſpected as being precarious; nay, ſome Phyſicians thought theſe *Scars* on the *Guts* involved an Impoſſibility, and that they contradicted the moſt common Experience; which therefore they thought could not be, or that they were not to be admitted as *Facts*, and far leſs as *Cauſes.*

Hippocrates, as will appear more particularly hereafter, had no Notion of *Ulcers* in the *Guts* being neceſſarily in the time of every *Dyſentery*; and I will ſhew that the *Guts are* ſeldom found with *Ulcers* in thoſe that die of that Diſeaſe. If *Ulcers* then are not eſſentially joined with a *Dyſentery*, the *Scars* that are pretended to be made by them, and to which Scars the Cauſe of a *Cœliack Paſſion* are ſaid to be owing, do not exiſt in that Caſe, neither a *Dyſentery*, nor its conſequential *Scars*, can any ways be a Cauſe of the *Cœliack Affection.* But if the Argument is inverted, and we ſuppoſe the *Scars* a Cauſe of a *Cœliack Affection*, and that this Diſeaſe could not otherwiſe be conquered than by bringing a Remedy againſt the Scars, its *immediate* Cauſe; it follows, that when a *Cœliack Paſſion* has been cured,

that

that then the *Scars* were removed, which is contrary to Experience; becauſe we do not find any Remedy ſufficient to remove any *Scar* on the moſt fleſhy Part, and far leſs on Parts that are membranous. And therefore the Diſeaſe is ſuppoſed to be removed, without firſt removing its immediate Cauſe; which is a Contradiction, and is a plain Proof that theſe *Scars* are no *Cauſe* of a *Cœliack Affection*; and far leſs is the *Dyſentery* a Cauſe, becauſe of its pretended *Ulcers*, that are ſuppoſed to make theſe fictitious Scars; or a *Dyſentery* is not a Cauſe of the *Lientery*, nor of the *Cœliack Affection*.

Ancient Phyſicians were well apprized of the great Bulk of Abſurdities that were comprehended in this Suppoſition. [a] *Cœl. Aurelianus* rightly conſiders, that every one of the *Guts* may be affected by the *Dyſentery*, but it cannot be ſuppoſed, that every one of the *Guts* are affected with *Ulcers*, becauſe a Man muſt die before all his Inteſtins are exulcerated; and therefore concludes, that this Notion is very abſurd. The moſt excellent Phyſician, *Laz. Riverius* [b], purſues this Argument, and confeſſes, that the ſuppoſed *Scars* are not to be received for a Cauſe of the *Cœliack Affection*, becauſe on this Suppoſition, all the *Guts* muſt needs be exulce-

[a] 4 de acut. paſſion. [b] Lib. x. cap. iv.

rated, and the *Cicatrices* formed upon theſe Ulcers muſt be ſufficient to ſhut up (very near) all the *meſariack Veſſels*, which he thinks ought not to be ſuppoſed, becauſe it is impoſſible for a Man to live in ſuch a State of ill Health. This Argument is the more urgent, if we conſider that the *Scars* and *Cicatrices* muſt be ſo many, and ſo general, as to anſwer the Experience of excluding all, or the greateſt Part of, the Chyle; which could not be if theſe *Scars* were few, and only on ſome of the *Guts*.

Another uſe was found for theſe *Cicatrices*, beſides the precluding the Paſſage into the *meſaraick Veſſels*, and that was their making that *Lubricity* and *Slipperineſs* that has been ſuppoſed neceſſary, both in the Caſe of the *Lientery* and *Cœliack Affection*. I have already ſhewn the Fallacy of this Slipperineſs *Phyſicians* are ſo very fond of, and which they think neceſſary in the Caſe of our preſent Diſeaſes; as alſo, that it contributes very little in explaining the quick Paſſage of our Food, whether that is concocted, or not concocted; and ancient *Phyſicians* likewiſe ſuſpected this Inſufficiency, as I have ſhewn.

Galen [a], whoſe Opinion is followed in the *Guts* having *Ulcers*, when Men have a

[a] In aph. Hipp. lib. vi. ſect. i.

Dyſentery, thinks ſomething elſe neceſſary for producing a *Lientery*, beſides the *Slipperineſs*, ſo much aſſented to by the generality of Authors; and the Power that is in the *Stomach*, to retain and concoct the Food, is rather a *Faculty* in that part, than that it is owing to its *Aſperity*, and *Roughneſs*; which is commonly ſuppoſed. So, then, the Reaſon why the Food paſſes ſo quickly out of the Stomach, he ſuppoſes, more to be owing to ſome Defect of this Faculty in the *Stomach*, than to any new Smoothneſs, or Slipperineſs in that part. The truth of which general Expreſſions, we that have lived after the great Improvements in *Anatomy*, are fully apprized of; for we know what theſe Powers of the *Stomach* are, and what this its *Faculty* is, whereby the *Food* is retained; as alſo what *Change* and *Faculty* there is in the Food, that overcomes the Faculty and *Conatus* of the *Stomach* to retain it. And therefore a *Dyſentery*, and all the Conſequences of it, have no Means, Power, or Faculty, to produce the *Lientery*, or the *Cœliack Affection*; *h. e.* It is not, nor cannot, be a Cauſe of theſe Diſeaſes.

It is very manifeſt, upon this Examination and Inquiry, that of all the Cauſes of a *Lientery*, aſſigned by Phyſicians, there is only one, that can any way produce that Diſeaſe, and its Symptoms; which Cauſe is the *Sharp-*

neſs unconcocted Food acquires in the *Stomach*; whereby the *Stomach* is ſtimulated, and is preter-naturally contracted; and, by this Contraction, the *Food* is thrown out of the *Stomach*, before it has acquired a due Degree of Concoction.

It is likewiſe manifeſt, that Phyſicians have not, in all their Experience, diſcovered one Cauſe ſufficient to produce the *Cœliack Affection* and its Symptoms. The pretended *Scars* and *Cicatrices*, made on the *Guts* by a *Dyſentery*, were ſpecious *Cauſes*, and ſeemed to account for the Reſiſtance the *Chyle* might find in its Paſſage into the *Meſaraiack Veins*, as Phyſicians ſometimes ſpoke; but now theſe *Scars* are found to be impoſſible, and a greater Number of Facts, from Obſervation, are ſo far from being explained by this Suppoſition, that they manifeſtly contradict it.

And therefore, as the mentioned *Cicatrices* are the only Cauſe alledged for producing the *Cœliack Affection*; ſo they are plainly not the Cauſe of it. The Diſcovery made of the *Nature* of the *Cœliack Affection*, leads us into the immediate, and *antecedent Cauſes* of this Diſeaſe.

From all this account we may conclude, that either the *Lientery*, and *Cœliack Affection*, are very rare Diſeaſes (as they truly are) or that Phyſicians have not duly diſtinguiſh-

ed

ed between the *Lientery*, and *Cœliack Affection*, when they are the *essential* and *original* Disease, and when they are *Symptoms* only of a *Diarrhœa*, or of a *Dysentery*.

A Lientery, then, *is the voiding of Food more or less unconcocted, and still retaining its natural Form, and that quickly after eating, and commonly in the Way of a Looseness, and that on account of that Sharpness and Acrimony the Food acquires in the Stomach.*

As also; the *Cœliack Affection is a Looseness, wherein, in some short time after eating, the Chyle is voided; and that because it is not diluted with the Liquors, that naturally flow into the Guts, and by the Sharpness it therein acquires.*

CHAP. X.

The Prognoſticks of the Lientery *and* Cœliack Affection.

FORMERLY, when I explained the *Prognoſticks* of a *Diarrhœa*, I affirmed, that the Prognoſtick a Phyſician made in any Diſeaſe, is his Expectation, he declares about the Curableneſs of the Sick, under certain and aſſigned Circumſtances of the Sickneſs. As alſo; that this Expectation, can only be drawn from the *Nature* of the Diſeaſe, the *Quantity* and *Intenſeneſs* of the Diſeaſe; which are compared with the Strength of the Sick, and the Powerfulneſs of the Remedies.

When we conſider then, how little Phyſicians have hitherto diſcovered of the *Nature*, either of a *Lientery*, or of the *Cœliack Affection*; we cannot be ſurprized, that we find them giving a very imperfect, though a very fatal Account, of thoſe Diſtempers; and conſequently, that the Prognoſticks of Phyſicians are expreſſed in very general terms, very improperly, and, often, not particularly relating to the Diſeaſe.

But

But as *Hippocrates* has anciently given us the Prognosticks of the Lientery, whom every Physician has implicitly followed; I will repeat what is said by that excellent Physician, and endeavour to explain what he has taught us; since the Method of my Work brings me, at present, to give the *Prognosticks* of the *Lientery* and *Cœliack Affection.*

[a] *These Lienteries,* says *Hippocrates, that are daily pouring forth, and last for a long Time, discharging always with Wind, or without it, afflicting the Sick Night and Day, much after the same Manner; and that which is voided is very crude, or is black, and light, and has an ill Smell: All these Kinds of a Lientery are ill,* h. e. according to *Celsus,* the most dangerous; *and* (as *Celsus* expresses it) *if there is a great Drought, and they do not make Water after drinking; because, at that Time, all the Liquor does not go down into the Bladder, but into the Guts: If there are Ulcers about the Mouth; if the Face is red, and abounds with Pimples of various Colours; if the Belly is in a Sort fermented* (or, in the Language of *Celsus,* the Belly is *swelled and puffed up*) *fat and wrinkly, and they have no Desire to eat.*

[a] Lib. 2. prædict. Sect. 2. pag. 105.

The next Thing *Hippocrates* acquaints us with, is, [a] *that Lienteries with a Difficulty of breathing, and a gnawing Pain in the Cheſt, end in a Conſumption.*

Hippocrates gives us ſome hopes of recovering the Sick, [b] *when they come to have ſour Belchings, they had not before, after being long ill of a Lientery.*

But as this laſt Prognoſtick is a Foundation, upon which one Method of curing a *Lientery* has been raiſed; we will leave the farther Conſideration of it, till we can examine it in its proper Place; and I will only add, that as it is a *Prognoſtick*, it is grounded upon the Philoſophy of the *Stomach* having acquired more *Heat*, and greater Vigour.

To return to the firſt Prognoſtick I have taken from the great *Hippocrates*; it muſt be confeſſed, that there will not any Thing be found in it, that is peculiar to the *Lienteria*, and on that account does not more particularly relate to that Diſeaſe, than it does to a *Diarrhœa*; for if we conſider, the Mortality that follows commonly the mentioned Symptoms, as the continual purging, that laſts on the Sick a long Time; or that we are led into the Nature of the *Looſneſs*, by the Stools that are voided in time of it; all

[a] Coact. prænot. 469. [b] Aph. 1. Sect. 6.

theſe

theſe more properly are Symptoms of a *Diarrhœa*, which have been already examined, even to ſhew the Way how thoſe Symptoms proved mortal by their continuing; to which Place we may have recourſe, if we would know the manner how the different Sorts of a *Diarrhœa* carry us off the Stage.

Phyſicians have taken up an Opinion againſt all Reaſon and common Experience, that a *Diarrhœa* is the moſt ſimple Species of a Looſneſs; as if there were leſs Variety in its Symptoms, and fewer Cauſes that produced it, than either the *Lientery*, or *Dyſentery:* But the contrary is very manifeſt, from the particular Inquiry I have made into the *Diarrhœa* and *Lientery*, and will be fully as obvious in the Caſe of a *Dyſentery*, when it is explained.

The Symptoms of *Drought*, and of the *ſmall Quantity of Water* the Sick make, have been likewiſe accounted for among the Symptoms of the *Diarrhœa*. The Reaſon aſſigned by *Hippocrates*, may ſometime be true; but that I have given, in accounting for this Defect of *Water* in a *Diarrhœa*, is the moſt general Cauſe, as well as the moſt natural. The remaining *Symptoms* are very far from being peculiarly the Effects of a *Lientery*, under any Circumſtance of it, ſo that they do not require our Conſideration at this Time.

What *Hippocrates* has obſerved of a *Lientery*, with an *Aſthma*, tending to a Conſumption, in the moſt general Senſe, is equally true of every *Looſneſs*, and is not, for that Reaſon, any *Prognoſtick* about the Event of a *Lientery* more particularly: So that Authors have concluded well enough from thoſe Predictions, that a *Lientery* brings a lingring *Death* through a *Dropſy*, or an *Atrophy*; and both by withdrawing the neceſſary Aliment from the whole Body.

But I cannot omit the Conſequence drawn from this Prognoſtick of *Hippocrates*, by one of his beſt Commentators, *Proſper Martianus*. This learned Phyſician, well acquainted with the Doctrine of *Hippocrates*, concludes, that the *Eſſence* of a *Lientery* does not conſiſt in the Food remaining in its firſt State, without any Change; ſince *Hippocrates* ſays, *black and fetid Stools are voided*; but he conjectures [a], that the Eſſence of a *Lientery* rather conſiſts in a Corruption of the Food, whereby it becomes ſharp, and excites Nature to expel it more quickly. Whether this Corruption proceeds from the Food not being digeſted, becauſe of the great *Heat* of the *Stomach*, and that it abounds with Moiſture, or the

[a] Prædict. Hippocr. Lib. 2. Sect. 2. Edit. Rom. pag. 517.

immoderate

immoderate *Heat* of the *Stomach* only, or from any other Cauſe before the Food acquires the Change that naturally furthers the Concoction: But however that happens, theſe Stools give it the right of being called a *Lientery*.

This Notion of the learned *Martianus* is very ſingular; but it would bring great Confuſion into the *Diagnoſticks* of moſt Diſeaſes, if we did admit it; and in the preſent Caſe, no Man could diſtinguiſh between a *Diarrhœa* and a *Lientery*; nay, were there no diſtinctive Mark between the mentioned Diſeaſes, beſides this, a *Lientery* muſt be an imaginary Diſeaſe only, that could never affect Men, and did not require the Conſideration of Phyſicians.

We find in all the *Prognoſticks* of Phyſicians, there is not any thing ſaid of the *Cœliack Affection*; though this and the *Lientery* are acknowledged to be two very different Diſeaſes Phyſicians always treat of together, and at the ſame Time. Could we think the Cauſe, commonly aſſigned for producing the *Cœliack Affection* poſſible, the *Prognoſtick* of that Diſeaſe would become very eaſy, becauſe *Scars* every where ſhutting up the *Meſaraick-Veins* (as theſe Phyſicians ſuppoſe) or the Mouths of the *Lacteal Veſſels*, could never poſſibly be cured; and, in that Caſe, there ſhould be one Expectation

on only; and that is, that the *Cœliack Paſſion* is an incurable Diſeaſe; which, though, is againſt Experience.

Phyſicians muſt acknowledge, that the Diſeaſes under our Conſideration have wholly baffled the moſt diligent Obſervation of the moſt inquiſitive and ſagacious Phyſicians. Did we not barely know that our *Food* was voided without any Change made on its outward Form, when Men have a *Lientery*; and that the Food acquires, more or leſs, the Form of *Chyle*, when they are ill of a *Cœliack Affection*, we ſhould not have any Place where to begin, and far leſs where to fix our Inquiries. *Phyſicians* did not know formerly, enough of the *Anatomy* of the *Guts*, nor of the Doctrine of Concoction; both which were neceſſary to conduct their Obſervation, and to aſſiſt them in recording what was moſt likely to be the Cauſes of the mentioned Diſeaſes. In later Times, *Phyſicians* have not duly applied their Knowledge of Concoction to their *Anatomical* Diſcoveries; which is all that is wanting for a good Account of a *Lientery*, and of a *Cœliack Affection*; as is evident from the Account I have given of theſe Diſeaſes: Though I wiſh Obſervations might hereafter aſcertain the *antecedent* Cauſes of this Diſeaſe, which is ſo very uſeful in forming

forming right Prognosticks, and which is much wanted, notwithstanding that I have determined the immediate Causes of the *Lientery* and *Cœliack Affection.*

I will add, in the mean time, a *Prognostick* or two, that flow more immediately from the Account I have given of the *Lientery* and *Cœliack Affection.*

The sooner any Meal is thrown off after it is taken down, and the less Change there is made on the Food, the *Lientery* is the more dangerous.

On the other hand, the greater the Concoction of the Food, the more it approaches to the Case of a *Diarrhœa*, the more easily it may be cured.

The nearer the Quantity of Chyle thrown out in the *Cœliack Passion* is to the Quantity of Aliment, the harder is that *Cœliack Affection* to be cured.

A *Lientery*, and a *Cœliack Affection*, being the *Symptoms* of a *Diarrhœa*, or of a *Dysentery*, are cured more easily, or with greater Difficulty, as are the Diseases upon which they depend.

And lastly, a *Tympany* succeeding a *Lientery*, or rather the *Cœliack Affection*, shews that *Cœliack Affection* is never, or hardly to be cured; especially, if with it are the *Jaundice* or a *Consumption*; which *Symptoms*

toms render thoſe Diſeaſes abſolutely incurable, by any Means hitherto known to Phyſicians.

Now as all theſe *Prognoſticks* neceſſarily flow from the Doctrine of a *Lientery*, and *Cœliack-Affection*, formerly eſtabliſhed; and that ſo manifeſtly, that a very ordinary Reader may make theſe Conſequences, I will not purſue ſo plain and obvious a Subject, but will rather proceed to the Cures of theſe Diſeaſes.

CHAP. XI.

The Cures of a Lientery *and of a* Cœliack Affection.

WHEN I related the different and various Ways there were of curing a *Diarrhœa*, I found every Thing was attempted for the Cure of it, that had ever been adminiſtred in the Cure of any other Diſeaſe: But my Complaint on this Occaſion is altogether of another Nature; for there

there are so few Medicines recommended for the Cure of a *Lientery*, or of the *Cœliack Affection*, that we hardly find a Method of Curing, nor a Remedy for them, in the History of Physick. Here is the greatest Exception to an Observation of *Corn. Celsus*; who alledges, that a Disease is always the hardest to be cured, when we find many Methods, and many Medicines, recommended for its Cure. The reverse of this is our present Case; for here we ought to have a certain Method of Curing, because we are not oppressed with great Numbers of Medicines that are said to cure it.

The Maxims upon which the Cure of the *Lientery*, more especially is founded, are traditionally preserved from *Hippocrates*; but we find no particular and distinct Method for curing the *Cœliack Affection*; whether they thought it incurable, or that it admitted of the same Cures with the *Lientery*, I cannot determine.

[a] *When sour Belchings*, says Hippocrates, *that were not before, come upon a sick Person who has been long ill of a Lientery, as it happened to* Demeyera, *they are a very good Sign. Perhaps we may procure them by Art.*

[a] Lib. 2. Epid. Sect. 2. Aph. 1. Sect. 6.

Vomiting,

Vomiting, especially in the Winter, is forbid by *Hippocrates*, otherwise than we find in the Cure of a *Diarrhœa*; for he declares, [b] that *it is very ill for a Person ill of a Lientery, to take a Vomit in the Winter.*

[c] *The Sick of a Lientery require curing*, says Hippocrates, *till the Urine bears some Proportion to what they drink, and till the Body feels* (or is nourished with) *the Food they take, and the Skin looks lively, and has put off its dirty Colour.*

Now after relating these Maxims of curing the *Lientery*, brought down from that antient and great Physician; we must observe, that they are not Consequences drawn from the *Course* or *Nature* of that Disease, as Indications of curing should be; but rather some general Marks and Experiences *Hippocrates* has made on some Patients; which Signs, perhaps, do not belong to the Disease, as future Experience might show.

I find *Galen*, and learned Physicians since his Time, entertain very great Difficulties about the first, more particularly. *Hippocrates*, says *Galen*, when he comments on this Place, had Reason to say, *in a* Lientery *of a long standing*. Their Way of arguing, was, *that there were four Belchings in a Lientery, especially if it proceeded from a cold In-*

[b] Aph. 12. Sect. 6. [c] Lib. 2. prædict.

disposition

diſpoſition with Humours; yet this Belching is never good, becauſe People never recover their Health while it laſts: And therefore it muſt be only in a Lientery *of a long ſtanding, and that the Belching too was not before.*

But by the Account we have of a *Lientery* from all Phyſicians, it is manifeſt, that the Food is thrown out of the Body, with few or no Marks of Concoction upon it. On the other hand, *Belching* up ſome of our Aliment in a liquid Form, is a Degree of Concoction, and conſequently the *Lientery* is not ſo great when the Food is ſomewhat concocted, as when it has not undergone any Degree of Concoction: *Belching* then is a good Sign, eſpecially when it did not attend the Diſeaſe, whatever be the Cauſe of Concoction.

Hippocrates however will give us a Reaſon for the Goodneſs of his Sign; and afterwards propoſes how far we may imitate Nature in procuring *Belching*. The Cauſe of this Motion of Belching is good, becauſe it ſhews us, that the natural *Heat*, which before made no change in our Meat, is become more powerful; ſo that it begins to change and concoct it.

Now though theſe *Belchings* are the Effects of a Degree of Concoction, which is ſo much wanted when Men have a *Lientery*; but

but as this is at beſt a Mark, and a Sign only, but not a Cauſe of Concoction, it were to no Purpoſe to attempt the provoking of *Belching:* Nay, when our Concoction is beſt, and we are the moſt removed from a *Lientery*, we are the freeſt from all ſuch unſavoury Guſts and Belching; ſo far are they from being uſeful to us.

This however teaches us by the by, how careful and diligent *Hippocrates* is in drawing practical Concluſions from every Obſervation; and the very Method *Hippocrates* would build on this Obſervation, or rather with great Modeſty ſuggeſts, is a common Error Men fall into in obſerving it, *viz.* miſtaking an *Effect* for its *Cauſe*. Were Men as careful as we find *Hippocrates*, and did they try their Suſpicions by future Obſervations, ſuch Errors would be quickly detected; which Errors, through a Neglect of Obſervation, paſs down as *Truths* upon a pretended Authority of the great Phyſician. The Paralogiſm I formerly detected of curing a *Diarrhœa* by *Diuretick* Medicines, is of the ſame Nature, but infinitely better founded; ſo well, that it might ſtill be preſumed, that a *Diarrhœa* might be cured by the mentioned Medicines, if the Obſervation of *Hippocrates* was not unqueſtionably explained, upon the moſt obvious Principles of *Anatomy*, and of the *Statick* Phyſick.

Hippocrates, we find only mentions this Obſervation of *four Belchings*, and propoſes to our Conſideration, whether it is of that Uſe and Conſequence, as artificially to imitate what Nature ſeems to hint; yet, without any further and proper Inquiry, ſome Phyſicians have built the Neceſſity of practiſing upon this hint of an Obſervation; at the ſame time we no where find any Medicines that anſwer their Indications.

The next Obſervation is about *Vomiting*, for curing a *Lientery*. I have formerly accounted for the Experience of *Hippocrates* in curing a *Diarrhœa* by vomiting Medicines, he ſo juſtly commends: Beſides, as that excellent Phyſician found that Vomiting was not ſafe in every *Diarrhœa*, ſo I have determined the Caſes and Circumſtances of a *Diarrhœa*, when *Vomits* are uſeful, and when they are hurtful; *h. e.* I have fixed and eſtabliſhed the Uſe of Vomits to their proper Circumſtances of the Diſeaſe. Now however uſeful vomiting Medicines are eſteemed by *Hippocrates* in a *Diarrhœa*, yet he dares not recommend them in a *Lientery*; for he tells us expreſly, that it is dangerous for the Sick of a *Lientery* to take a Vomit in the Winter.

The Experience of *vomiting Medicines* *Hippocrates* has made in the two mentioned Diſeaſes, is widely different: In one, a Vo-

mit is generally the beſt of Adminiſtrations; in the other, it is dangerous and ineffectual; a very notable Obſervation, and ought never to be forgot by Phyſicians, and with it the great Candor of the great *Hippocrates*. He confeſſes the ill Succeſs of ſome of his beſt Medicines, while ignorant Phyſicians never pretend to find any croſs Succeſs in their Practice.

We do not find this Practice, by *Vomits*, has any relation to the Accounts given by Phyſicians of the *Lientery*; but that *Hippocrates* probably adminiſtred them analogically, being encouraged therein by the Succeſs he had formerly in curing a *Diarrhœa*; and therefore gave them in the *Lientery*, another *Species* of a *Looſneſs*. But this ill Succeſs from a *Vomit*, in Caſes of a *Lientery*, may be accounted for by what I have ſhewn of the Nature of a *Lientery*, and of its Cauſes I have hinted: Beſides, there is great Difficulty and Trouble in bringing up indigeſted Aliment by a vomiting Medicine, if there was no Danger attended its Operation.

The Danger of vomiting Medicines in the Cure of a *Lientery* is manifeſt, if *Thruſhes*, a *Phlegmon*, or *Ulcers* in the *Stomach*, any Ways conduce to, or are Concomitants in a *Lientery*. And therefore this Experiment of *Hippocrates* is manifeſtly dangerous; and Vomiting is always to be avoided in Caſes of

of a *Lientery*, however uſeful they ſometimes are in the Cure of a *Diarrhœa:* Here then we are taught what to avoid, but nothing what is to be done for curing the *Lientery.*

Why Vomiting is more hurtful in Winter particularly, may not be ſo very obvious; unleſs it is, that all the mentioned Symptoms are more violent in Summer, than in Winter, more eſpecially in hot Countries. It is very certain, that vomiting Medicines operate more powerfully, or that they produce like Effects in a hot Country, to what they do in a cold one, in a ſmaller Doſe; upon both which Accounts vomiting Medicines may be pernicious in Caſes of a *Lientery.*

The laſt Maxim, I have taken from *Hippocrates*, regards rather the Time the Sick are to be treated by Medicines, than inſtructs us in the Kinds of Medicines that are moſt uſeful for curing a *Lientery.* The Sick of a *Lientery* require a Cure, *till their Urine bears ſome Proportion to what they drink, and till their Skin puts off its dirty Colour:* The notable Diſproportion of the Urine, to the Quantity the Sick drink, and the Dryneſs and Dirtineſs of their Skin, are two as obvious Symptoms of that Diſeaſe, as we find about the Sick; and therefore, while theſe Symptoms remain, the *Lientery* likewiſe remains

uncured: On the other hand, when these Symptoms disappear and vanish, there is no further Occasion for Medicines: Thus appears the Truth of this Rule of *Hippocrates*; though we are neither instructed by it, nor by any of the former Observations, of the Means of curing the *Lientery*.

Very many Authors have infer'd the Necessity of *diuretick* Medicines, for provoking a Quantity of Water, as *Hippocrates* thought proper for the Cure of a *Diarrhœa*; but however useful he might think it to provoke a Quantity of Water in this Case, yet he does not in the least vouch for a *diuretick* Medicine in the Cure of a Lientery: On the contrary, *Hippocrates* is of Opinion, that the Drink does not descend into the Bladder (as he speaks) in time of the *Lientery*; which he assigns for the Cause of the deficient Quantity of Urine and Water.

It is now very plain, that we cannot deduce any Method of curing a *Lientery* from these Observations. Indeed Physicians either had no Method for curing this Disease, and far less the *Cœliack Affection*, (which is not so much as mentioned among the Maxims of curing) or else they thought that those Diseases admitted of the like Method of cure with a *Diarrhœa*, though these Diseases are as opposite in their Nature and Symptoms, as any two Diseases whatsoever. What

can

can the Medicines recommended for curing a *Diarrhœa*, do towards the Cure of the greateſt *Indigeſtion*, or for obtaining a better *Secretion* of the Liquors that flow into the Guts?

We muſt now therefore conclude, that either a *Lientery*, and a *Cœliack Affection*, are very rare Diſeaſes, (as they certainly are) and were never cured by the Medicines that cure a *Diarrhœa*; or that Phyſicians have only cured them when they were Symptoms of, and followed, a *Diarrhœa*, or a *Dyſentery*.

This Obſervation is ſo true, that we may find the pretended Reformers of *Riverius* avowing it publickly. They tell us in their Remarks on that Place, that what is wanting for the Cure of the *Lienterick* and *Cœliack Flux*, is ſufficiently provided for by *Riverius* their Author; as alſo by what has been ſaid concerning a *Diarrhœa*; yet no where is *Riverius* more defective, and no where they leſs officious: And both upon the Account of the great Difficulties that occurred to them in the Cure of the *Lientery*, and *Cœliack Affection*. And it is evident, that the Reformers of *Riverius* had no better Notion of a *Lientery*, and knew no better Means of curing it, than did their antient Phyſician, though they lived after great Diſcoveries have been made in *Anatomy*, and great Improvements in the *animal Oeconomy*.

But that I may mark out ſome general Method for curing the Diſeaſes I have inveſtigated; it is, in the firſt place, very certain, that there is not any particular Regard wanting, when they are the Symptoms and Followers of a *Diarrhœa*, or of a *Dyſentery*; for there are ſome Parcels of indigeſted Food, or even when it is better concocted, and become Chyle, to be found among the Stools in a *Diarrhœa*, or in a *Dyſentery*; it is certain, that the *Chyle* and Food, in that Caſe, are only carried off in the common Current of the other Diſeaſes, and that there is no Diſcharge either of unconcocted Food, or of Chyle, after thoſe Diſeaſes are cured; and therefore when a *Lientery*, or the *Cœliack Affection*, are Symptoms of a *Diarrhœa* more eſpecially, or of a *Dyſentery*, they cure a courſe, or are not to be perceived, the *Diarrhœa* or *Dyſentery* being cured.

But 3^dly, as a *Lientery* proceeds altogether from the *Stomach* being ſtimulated, either by ſome Defect of the Liquors commonly ſecreted in it, or by a Sharpneſs the *Food* acquires in the *Stomach*; the *Indications* for curing a *Lientery* plainly flow from the Nature of a *Lientery*: On the other hand, the Chyle not being duly brought to its natural Thinneſs, that is requiſite for its paſſing into the *Lacteals*; or that it is not duly diluted by the *Gall, pancreatick Juice*, or the other *watry*

watry Liquors it is commonly mixed with in the *ſmall Guts*; in either of theſe Caſes the *Chyle* is thrown out of the Body, in the *Cœliack Affection*, as has been evidently ſhewn; and the *Indication* for curing a *Cœliack Affection*, is to render the Concoction more perfect, or to procure a more natural Diſcharge of the *Liquors* of the *Guts*, both which are very practicable; whereas the *Indication* taken from the Cauſe of a *Cœliack Affection* could never be ſatisfied, and in their Notion of the Diſeaſe, it did never admit of a Cure; and yet they tell us of their curing the Diſeaſe, but by Means altogether inſufficient.

And now we may obſerve, that the Methods of curing a *Diarrhœa* by no Means anſwer the true Deſign of curing the *Lientery*, or the *Cœliack Affection*, as Phyſicians vainly imagined, and as every Body has experienced, who have had an Opportunity of practiſing in theſe Diſeaſes, when they are eſſential and original Diſeaſes, and not *Symptoms* of other Diſeaſes.

From this View of the *Indications* for curing a *Lientery* and *Cœliack Affection*, it is obvious, how we may anſwer theſe *Indications*; and from whence we may borrow Medicines proper to put our Intentions into Practice. And therefore I will proceed, as I formerly did in the Cure of a *Diarrhœa*, to

relate ſome of the moſt effectual Medicines *Authors* have experienced in the Cure of the *Lientery* and *Cœliack Affection*; which an underſtanding Phyſician may properly apply by the help of the Account I have given of theſe Diſeaſes.

Purging Medicines have been much commended for curing a *Lientery*.

This Form has been often uſed.

℞ *Radic. Cichor.* ℥j. *coq. in ſ. q. Aq. ad* ℥vj. *Sub finem Coctionis adde Comar. Abſynth. pug.* i. *bulliant, & fervida verſentur ſuper rad. Rhabarbari el.* ℥j. *debite infuſis exprimatur Colatura; cui adde Syr. Menthæ* ℥ß. *F. Potio purgans cum regimine propinanda.*

Sennertus ſays, that *Rhubarb* ſteep'd in *Roſe-Water* is a powerful Remedy for a *Lientery*.

The following purging Powder is well eſteemed among Phyſicians.

℞ *Pulveris Radic. Jalap. Rhei el. ā.* ʒß. *Nuc. moſchatæ toſtæ* ʒj. *m. f. Pulver. doſ.* ij, *quarum doſin alterno manè capiat.*

To this purpoſe many Phyſicians have purged their Patients with this Powder.

℞ *Radic. Rhab.* ʒj. *Mercur. dulc. gr.* xlv.

Reſinæ Scammonii gr. xxxvj. *Maſtich.* ʒß. *Croci mart. gr.* xiv. *Nuc. moſchat.* iß. *toſtam. M. F. pulvis. Hujus* ʒj. *ad* ʒß. *exhibeatur unicâ vice.*

Galen commends theſe *Lozenges* of *Beritius.*

℞ *Nardi, Croci, utriuſque* ʒij. *Myrrhæ, Succi Hypociſtidis, Aloes, Opii, Tragacanthæ, Licii indici, Gallæ, Aniſi, Acaciæ, Piperis, Rhupontici ſingulorum* ʒj. *Tragacantham in vino macerato, & reliqua trita miſceto; Paſtilloſque unius drachmæ formato, atque ipſos è vino dato.*

Conſtantinus Africanus commends this Powder of *John Damaſcen.*

℞ *Maſtichis, Cubebæ, Cariophylli ā.* ʒv. *Ligni Aloes puri* ʒxx. *Gallæ* ʒß. *Sacchari* ʒxl. *F. pulvis, dentur ad bibendum* ʒiij. *cum odoriferis Syrupis.*

Petrus Foreſtus highly commends a Powder of *Hens-Gizards*, drank by a Perſon that is ill of a *Cœliack Affection.* He likewiſe recommends the following *Electuary*, which he had often uſed in a *Lientery*, and which *Amatus Luſitanus*, and *Lazarus Riverius*

verius have likewiſe very much commended; but I will tranſcribe it from the firſt Preſcriber, *Foreſtus*.

℞ *Sacchari Roſarum* (they *Conſervæ*) ℥vj. *Theriacæ optimæ* ʒvj. *Myvæ Cydoniorum q. ſ. f. Opiata, de quâ ſumat* ʒß. *manè*.

In another of his Obſervations, he ſays, he cured a Perſon who was deſperately ill of a *Lientery* with the *Yolk* of an *Egg*, on which was the Powder of one *Nutmeg*; which *Egg* and Powder were afterwards roaſted on a hot *Tile* or *Brick*.

Felix Platerus preſcribes this Powder.

℞ *Nucis moſchatæ aſſæ* ʒij. *Corallii* ℈ij. *Cariophyllorum toſtorum, ſeminis Coriandri ppti ā.* ʒj. *Da cum Vino, vel addatur Saccharum roſaceum. Fiat Conditum, vel, ex Carne Cydoniorum, Electuarium.*

Lucas Tozzi has a notable Obſervation of a Perſon ill of a *Lientery*, whom he ſaw cured with a ſalt *Herring* eat with Vinegar, though the ſick Perſon was miſerably afflicted with the Diſeaſe. *Tulpius* has ſeveral Obſervations of the good Effects of *pickled Herrings*,

rings, in Diſeaſes of the Stomach, and for other Diſeaſes.

Beſides the *Medicines* I have copied from Authors, which they have ordered to be taken inwardly for curing a *Lientery*; they recommend *Ointments*, *Plaiſters*, *Poulteſſes*, &c. to be outwardly applied.

Platerus has this Plaiſter.

℞ *Maſtichis* ʒij. *Thuris* ʒj. *M.* He likewiſe adviſes us to a Plaiſter of *Storax*. The *Emplaſtrum Diaphœniconis Meſuæ*; or *de Cruſtâ panis Montagnanæ*.

Lazarus Riverius uſes the following *Bags*.

℞ *Radic. Biſtort. Tormentill. Cortic. Citri ſiccat. ā.* ʒij. *Folior. Menth. Plantagin. Abſynth. pontici ā. M. j. Nuc. moſchat. Cariophyllor. Cinnamomi ā.* ʒiij. *Roſar. rubrar. pug.* iv. *contundantur & incidantur, ut artis eſt, eiſque impleantur duo Sacculi interpuncti, qui macerentur in æquis partibus Aquæ ferratæ, & Vini rubri adſtringentis. Applicentur regioni ventriculi calidi & per vices.*

Benedictus Victor Faventinus Empyricus extols this *Ointment* from his own Experience.

℞ *Ol.*

℞ *Ol. Caſtor. Lilior. albor. Rut. Cheiri* ℥iij. *Succi Artemiſ.* ℥iv. *Aquæ ardentis* ℥vj. *bulliant ad aquæ conſumptionem, tunc adde Nigellæ, Maſtich. Cardamom. Galang. ā.* ʒiß. *Piper. Cariophyllor. Nuc. moſchatæ Xyloalo. ā.* ʒj. *pulveriſentur, & iterum parumper bulliant cum modico Ceræ. F. Unguentum, quo locus dolens ungatur, & lana ſuccida tepide ſuperponatur. Ex iſto Unguento videbis mirabilem effectum.*

Thus having given a reaſonable Number of the beſt Preſcriptions for the Cure of a *Lientery*, and a great Store may be found among them I have mentioned, as well as among other Authors; I proceed to give ſome Examples in a Caſe or two that have occur'd to me in my Practice.

Observation I.

Mr. *Symcock* was long ill with a Pain in his *Stomach*, and with going to Stool. He went five or ſix times in a Day, and was never eaſy after *eating*, till he had voided his Food in looſe Stools, and the Food unconcocted. He was dry; made but little Water, and that was of a high Colour.

As

As his Pulse was very great, I ordered him to lose eight Ounces of *Blood*, and he drunk this purging Draught next Morning.

℞ *Radic. Rhabarbari el.* ʒj. *Rosar. Santal. rub. Cinnamomi acut. á.* ℈j. *Infundantur clausa & calida per noctem in Decocti Tamarindor.* ʒvj. *Colaturæ, per expressionem factæ, add. Syr. de Cichor. cum Rheo* ʒß. *Sp. Lavendulæ compositi gutt.* xii. *F. Potio manè cum regimine propinanda.*

When he did not take any purging Medicine, he drank *white Drink*, wherein were boiled *Galangal* and *Tormentil* Roots: He took this *Bolus* Night and Morning.

℞ *Pulver. Ari compositi* ℈j. *Extr. Gentian. q.s. m.f. Bolus.*

In the Day time Mr. *Symcock* took of *Mynsicht's Stomach* Drops. These he took for some Time; but as he was not relieved by them, I ordered the following *Electuary* and *Tincture.*

℞ *Conserv. Rosar. antiq.* ʒj. *Theriac. Androm.* ʒj. *Conserv. Prunel. Sylvest.* ℈iv. *M. F. Electuar. Cap. Nucis moschatæ majoris*

majoris magnitudinem bis in die, ſupra-bibendo Tincturæ cochlear. iv.

℞ *Radic. Helen. Raphani ruſtic. ā* ℥ß. *Folior. Abſynth.* Mß. *Ligni Alo. Cort. Citri. Semin Coriand. ā.* ʒiij. *præpar. ſ. a. & infund. 24 horis in vini albi meroſioris* ℔iij. *coletur quælibet doſis uſûs tempore.*

Mr. *Symcock* quickly found the good Effects of this Medicine, and he perfectly recovered his Health in three Weeks, or a Month, by the Means of theſe Medicines.

Observation II.

Mr. *Anderton* was taken much after the ſame manner in 1711: He followed ſuch a Method as is mentioned in the preceding Caſe; but as he did not find ſo ſpeedy Relief thereby as Mr. *Symcock* did, I ordered him the following *Powder*. He took a Doſe of it every third Day, and recovered.

℞ *Rad. Rhabarb. el.* ʒj. *Mercur. d. gr.* xv. *Reſin. Scammon. Jalap. ā. gr.* xij. *Maſtich. gr.* x. *Croci Mart. gr.* v. *Nuc. Moſchat. dimidium toſtum. Pulveris hujus* ʒj. *accepit unicâ vice.*

Obser-

OBSERVATION III.

Mrs. *Skinner*, a very old *Lady*, was taken ill of a *Cœliack Affection* in 1703. She had nine or ten Stools every Day, which were as white as Cow's *Milk:* The Stools were without *Griping:* She was not very dry: Her Water was of a Colour higher than natural.

I preſcribed her ſome Things without any Benefit; and as ſhe was ſome Years before cured of a *Diarrhœa* by my Medicine, ſo ſhe would either have that, or ſhe would not take any other Medicines: Wherefore, complying with her Deſire, I ordered the Clyſter I often do in Caſes of other Fluxes, and, after it came off, ſhe took a Doſe of my Medicine; She took a ſecond Doſe at Bed-time, and a third next Morning.

Next Day I found her free from her Purging, and had only one natural Stool in that Day. She took a Doſe every Night at Bed-time, for three Nights more, and was never after troubled with any kind of Looſneſs.

CHAP.

CHAP. XII.

Of a Dyſentery, *or* Bloody Flux.

AS I am about to inquire into the *Nature* of a *Dyſentery*, and the moſt proper Methods of *curing* it, I find my ſelf engaged in ſome Difficulties about the *Name* of a *Dyſentery*; which Difficulties did not occur in the Diſeaſes I have already examined. For whatever may be the Importance in giving a proper Name to any Diſeaſe; yet, if the Names given to Diſeaſes have not an expreſs and poſitive Senſe and Meaning, it is unavoidable to fall into Miſtakes and Errors, that may have very fatal Conſequences attending them. It is not eaſy to diſcover why a *Bloody Flux* bears the Name of a *Dyſentery*, though its Species are very properly repreſented.

Phyſicians have not followed any of the Rules obſerved among them, in affixing the Name of a *Dyſentery* to a certain Number of *Symptoms* repreſented by that Name; and though it may not prove a fatal Error, if the Name of a Diſeaſe neither imports the *Place*, *Symptom*, or *Nature* of it; yet plain Language is neceſſary, leſt ſome Confuſion may ariſe, by creating falſe Repreſentations between

tween one Physician and another, which may give a Handle to false and hurtful Practices, that arise from the wrong representing a Disease; and therefore, that it may not be doubtful, what I mean by a *Dysentery*, I will endeavour briefly to fix the Name among Physicians.

Dysentery, then, being the most ancient Word, has been continued always among Physicians, but with some very considerable Variation. It is compounded of δὺς and ἔντερον, which [a] *Cœlius Aurelianus* explaining, calls DIFFICULTAS INTESTINORUM, *a difficultate Officii*; which Explanation does not impress the Idea of any one particular Disease upon us; and therefore *Cicero* tells us, that δυσεντερικὰ πάθη is *Viscerum Morbi*. For this Reason I rendered formerly *Difficultas Intestinorum* in *Galen*'s Definition of a *Dysentery*, the *Grief* of the *Guts*; which is far from giving us an Idea of a *Bloody Flux*, however proper the Translation may be.

This Expression is so very ambiguous, that Δυσεντερικὸς is understood by good Authors of such, *cui Alvus suppressa nihil reddit*; which is a Sense very contrary to that we commonly understand, when Physicians mention a *Dysentery*.

[a] Lib. iv. cap. vi.

This being premiſed, I proceed in my Enquiries about the Nature of the *Bloody-Flux*, which was called by *Greek* Phyſicians Δυσεντερία, and by *Latin* Phyſicians, after *Celſus*, *Tormina*. *Within*, ſays the great *Celſus*, *the Guts are exulcerated; Blood flows out of them, and that always with ſome liquid Excrements; with the Blood there is ſometimes voided a mucous and ſlimy Subſtance, and ſometimes a fleſhy Subſtance.*

Had theſe excellent Authors added one ſmall, but a very determining, Obſervation, the Diagnoſtick Signs had been more perfect; their Deſcriptions of a *Dyſentery* had been far more complete. This ſmall Circumſtance of the *Blood in a Dyſentery being conſtantly and always mixed with the Stools*, will hereafter be found of great uſe in extricating us out of many Difficulties, that have, hitherto, perplexed every Phyſician who has writ on our preſent Subject; which Obſervation I will therefore explain, among the other Symptoms that are to lead us into the Nature of a *Dyſentery*.

But before I can account for the mentioned Symptoms, it will be required that I relate the common Sorts of a *Dyſentery*, that are to be met with among Phyſicians: For [a] *Galen* has mentioned four different Kinds of a *Bloo-*

[a] De Symptomat. Cauſis.

dy

dy Flux, wherein he has been followed by *Trallianus*, and others. The *first* is the voiding of Blood in such People, who have lost a Limb, or who have omitted and given over their usual Exercises. The *second* Sort is, when poor and watry Blood is voided like Washings of Flesh, because of the Weakness of the Liver. A *third* Sort is by the Blood remaining too long in the Liver, becomes *adust*, *shining* and *melancholy*. But the *fourth* Kind of *Dysentery*, is, when the Expulsion is often, and in a little Quantity, and the Blood is sometimes pure, and altogether Blood; but it is sometimes congealed, or concreted.

We will not spend time in enquiring, at present, into these different Kinds of a *Dysentery*, because we may more properly settle or abridge these Kinds hereafter, as I am discoursing of the *Blood* of a *Dysentery*.

Galen indeed has another Division of a *Dysentery*, which must not be neglected, tho' we find not any mention made of this Division for fifteen hundred Years; and, perhaps, it may never be brought again into the Number. [a] *We know*, says he, *that there are two Kinds of Dysenteries; one, when the Guts are corroded with an Ulcer; the other, when a great Quantity of Blood*

[a] *Gal.* in lib. iii. Epidem. *Hippocrat.*

is voided by the Veins, that belong to the Guts. This laſt Sort has been received by the Phyſicians in all Ages, but the firſt has been rejected, with great Reaſon, till Dr. *Willis*, and Dr. *Sydenham* ſpake of it in an epidemick *Colick* in the Years 1669, 1670, and 1671, which they call an *Unbloody Dyſentery*; an impoſſible Diſeaſe, in the Opinion, and in the Account of all Phyſicians; for the Blood of a *Dyſentery* is an eſſential Part of it, without which it cannot be a Diſeaſe diſtinct from a *Diarrhœa*, or from the *Colick*; which laſt is plainly the Diſeaſe the forementioned Phyſicians deſcribe, and they incongruouſly name an *Unbloody Dyſentery*, or a *Bloody Flux* without Blood. Many more inſignificant and perplexing Diviſions of a *Dyſentery* are to be met with among later Authors in Phyſick, ſome whereof I will mark as they fall in my Way; ſuch Diviſions being the Corruption of Obſervation, which ſhew only the trifling of Authors, but nothing of their Accuracy in obſerving; and therefore do not deſerve our ſerious Conſideration.

But to proceed, then, in our Buſineſs, and to explain the Symptoms of a *Dyſentery*, with a Purpoſe of diſcovering its *Nature*; I muſt obſerve, that the greateſt Number of the Symptoms of a *Dyſentery* have been already found in the *Diarrhœa*, or they are

common

common to both Diſeaſes, tho' they may differ in ſome Degrees and Circumſtances; which Degrees and Circumſtances we are to diſcover on this Occaſion. The proper and diſtinguiſhing Symptoms of a *Dyſentery*, are the Exulceration mentioned by every Phyſician, and the Blood with liquid Excrements; which Blood muſt likewiſe be mixed with thoſe Excrements. Yet if the Symptom of *exulcerated Guts* proves an Hypotheſis, (as in Fact it is no true Symptom) in that Caſe, Blood mixed with liquid Excrements voided under the common Condition of a Looſneſs, is the *differential* and *pathognomonick* Symptom of a *Dyſentery*; which I will next endeavour to ſhew from the Deſcription of *Celſus*; tho' it will be uſeful to premiſe the Deſcription I formerly brought from *Hippocrates*, who informs us, *that when any Perſon is ill of a Dyſentery, there is Pain and Griping all over the Belly; and he voids Gall and Phlegm, and aduſt Blood.*

And firſt, I formerly demonſtrated, that the *periſtaltick* Motion of the Guts might be encreaſed, and a *Looſneſs* thereby produced, by every Cauſe that affects the *muſcular* Coat of the Guts, or ſtimulates their nervous Coat. As alſo, theſe Cauſes have been likewiſe aſſigned, and ſome of them have been found to be the natural Liquors of the Body, changed in ſome of their moſt ob-

vious and sensible Qualities. Now as these Causes of a Looseness have been already proved sufficient to produce a *Diarrhœa*, and the *Griping* its Symptom, common, we find, to it, and a *Dysentery*; it is therefore evident why there is *Pain* and *Griping* with a *Dysentery*, according to this Description of *Hippocrates*; as also, that this Pain is all over the Belly, because every part of the Guts are liable to be stimulated by the sharp Humours that occasion the Pain. *Hippocrates* likewise observes, that *Gall* and *Phlegm* are voided in time of a *Dysentery*. The reason of this Observation is obvious; for a greater Quantity of *Gall*, than natural, may be discharged into the *Duodenum* by the stimulating Causes of the *Dysentery*: Besides, the *Gall* itself is a very common Cause of a *Looseness*, as was formerly shewn; when, *viz.* it is either become really more *salt*, or that it is become thicker. When therefore there is a *Dysentery* there is voided *Gall* among the Stools; more especially when the *Gall* is a Cause of it: It is therefore manifest why *Gall* may be frequently seen among the Stools in a *Dysentery*. His next Observation is nothing so plain; since this supposed *Phlegm* is nothing commonly but the thinner *Mucus* that covers the *Colon* and most of the *small Guts*; and then the Case and Observation in general is true, or in a *Dysentery* there is voided

voided a *mucous* Substance like *glassy Phlegm.*

It was this *Griping* and violent Pain all over the Belly, that induced *Hippocrates* to believe the *Guts* exulcerated in a *Bloody Flux*: But as this Notion and Opinion of an *Ulcer* has been unanimously received by Physicians, even to this time, and does very much influence their Practice, it is become very necessary to inquire, whether the *Guts* are always exulcerated, when any Person has the *Bloody Flux*; because this Exulceration is supposed to be an essential and a constant Symptom of that Disease, and great Regard is often had to it in curing a *Dysentery.*

But, from the same way of reasoning, if *Griping* and *violent Pain* all over the Belly are certain Signs of an Ulcer in the *Guts*; then, and in that case, the *Guts* are always exulcerated when there is the like griping Pain; which no Physician, at this time, will assert. For what greater *Pain* and *Griping* is there almost in any Degree of a *Dysentery*, than we meet with in Cases of *Colicks*, and in the *Iliack Passion?* and yet no Provision is made against an *Ulcer*, in the *Cure* of them; because Physicians have no Suspicion of an *Exulceration* of the *Guts* in the most violent Fits of either of these Diseases.

Galen endeavours to determine in which of the *Guts* this Ulcer may be, in divers Cases of

a *Dyſentery*; and by the Marks he gives us, it would appear that he was well apprized of the different kinds of *Mucus* that covered particular *Guts*. *We muſt conſider*, ſays he, *if any fat Subſtance is voided together with the reſt: If ſo, we may believe that the Ulcer has fixed upon the great and thick Guts.* This Judgment of [a] *Galen* is very juſt; for this *Mucus* is different from the *Mucus* of the *ſmall Guts*, and does very much reſemble Fat; though it is not truly a fat Subſtance, becauſe it will not diſſolve and melt upon the Fire.

But we become abſolutely ſure of the Falſeneſs of this antient and unanimous Opinion of Phyſicians, that there is an *Ulcer* in the *Guts*, in every *Dyſentery*, by opening the Bodies of ſuch as die of a *Dyſentery*; for, in this Examination and Search, no ſuch Thing as *Ulcers* in the *Guts* are to be found; and a better Proof than the Teſtimony of our Eyes, cannot be deſired. This I have been taught by upwards of an hundred ſucceſſive Openings, without ever meeting with any of thoſe alledged Ulcers.

There are great Numbers of ſuch Obſervations to be found in our beſt Authors; who have, notwithſtanding, adhered to the Sentiments and Authorities of other Phyſicians, a-

[a] Lib. 6. de loc. affect.

gainſt

gainſt their own Experience. Doctor *Drelincourt*, an eminent *French* Phyſician, and afterwards a Profeſſor in the Univerſity of *Leyden*, confirms what I alledge, telling us that [a] *the Guts only appear thinner, and more bloody than natural; but they are not in the leaſt exulcerated.* It is then very manifeſt, that *Ulcers* in the *Guts* are not an eſſential and proper Symptom of a *Dyſentery*; and that, becauſe the *Guts* of thoſe, cut off by a *bloody Flux*, are very rarely affected with *Ulcers*; in the Beginning, eſpecially, of the Diſeaſe. An *Ulcer* in the *Guts* happens as ſeldom, as it is very ſeldom cured; whereas, the Difficulty in curing a *Dyſentery* is nothing ſo great, as the curing a *Diarrhœa*; whatever is commoly ſaid to the contrary.

Now, as it is very manifeſt, and out of all doubt, that an *Ulcer* is not a proper Symptom of a *Dyſentery*; ſo, far leſs can it forerun the Blood that is inſeparable from that Diſeaſe, and gives it the Name of a *Bloody Flux.* This eſſential Symptom of a *Dyſentery* may very readily be accounted for, if we recollect what is ſaid in the ſecond Chapter of this Book. We are taught, that the *Guts* have their *Blood* by the upper and lower *Meſenterick Arteries*, which Blood is returned back into the *Heart* by the *Meſaraick* Veins.

[a] Theſibus.

Beſides the *Velvet*, or inner, *Coat* of the *Stomach* and *Inteſtins*, is a Compoſition of *Blood Veſſels*: And therefore when theſe Veſſels are deprived of their Covering and Defence, the *Mucus* of the Guts, they are worn thin and are expoſed to all the ſharp Liquors, and other ſharp Subſtances, that we find ſo very common in a *Dyſentery*, and that occaſion the Griping and the extraordinary Diſcharge of the *Mucus*. But as this *Slime* and *Mucus* was deſigned naturally to prevent and defend the *Guts* from ſharp Juices and rough Subſtances that daily paſs along the *Guts*, and is at this time carryed off in the *Dyſentery*; it is eaſy to be believed that the ſharp Liquors will corrode and break into the *Blood Veſſels*, whereby the Diſcharge of Blood, which is inſeparable from a *Dyſentery*, is made into the *Guts*; as Phyſicians may daily obſerve.

The Blood in a *Dyſentery* is excellently well determined in *Celſus*, by the following Expreſſion, *and that always with ſome liquid Excrements*, which ſufficiently diſtinguiſhes the Blood of a *Dyſentery* from another *Hemorrhage*, or voiding of Blood without liquid Excrements; which liquid Excrements are eſſential to a *Looſneſs*, and denominate the *Dyſentery*, a *Species* of it. By this plain Account of the learned *Celſus*, it is manifeſt that the *Teneſmus* has no Right

to

to be numbered among the Species of a *Dyſentery*, as many great Authors have done; becauſe the Blood in a *Teneſmus* is in a very inconſiderable Quantity, and the Stools are never liquid in that Diſeaſe. A *Teneſmus* then is a Diſeaſe of its own Kind, and is never to be ranked among the Kinds of a *Dyſentery*.

From this Account we may clear away all the Confuſion we find among Authors, by multiplying the Species of a *Dyſentery*. This Confuſion is ſo great, that if thoſe fanciful and imaginary Diviſions and Differences are not reſtrained, we muſt quickly deface thoſe beautiful Hiſtories and Pictures of Nature we find excellently drawn by *Hippocrates*, *Celſus*, and other antient Phyſicians. But that I may not oppreſs my Reader with Numbers of Examples of theſe new Triflers, I will content my ſelf with an Inſtance or two I ſhall take from one of the lateſt Authors, and one (whoſe Maſter at leaſt) who pretends not only to Nicety, but to great Accuracy and Exactneſs. *Junckerus*, in his *View of theoretick and practical Phyſick*, after a barbarous Deſcription of a *Dyſentery*, has this third Difference. [a] A *Dyſentery*, ſays he, *muſt not be confounded with the Flux that is common and endemick in* Paris, *ſo that every Stran-*

[a] Pag. 342. Conſpectus Halæ 1718.

ger

ger is very obnoxious to the Diſeaſe. But we ſhall hear how theſe Diſeaſes (we muſt not miſtake, by taking one of them for the other) may be known and diſtinguiſhed from one another: *Why*, ſays *Junckerus*, or his Maſter Doctor *Stahl*, *this* Paris *Diſeaſe* (which all other Phyſicians call a *Dyſentery*) *begins with a Diarrhœa, and the voiding of Blood enſues it.* This is their firſt Mark; but how truly this *Pariſian* Diſeaſe, without a Name, differs from a true *Dyſentery*, the *French* Phyſicians never knew, nor will any other Phyſician be able to diſtinguiſh; for every Phyſician has aſſerted, that a *Dyſentery* may begin with a *Diarrhœa*; or that this often becomes a *Dyſentery*. And we find, indeed, that ſome Symptoms, or rather Cauſes of a *Diarrhœa*, become the Cauſes of a *Dyſentery*, or truly produce that Diſeaſe. And therefore, as the *Paris* Diſeaſe is the voiding of Blood with looſe Stools, as Doctor *Stahl* admits, it is truly and properly a *Dyſentery* in the Senſe of *Celſus*, and of every underſtanding Phyſician, and is not a different Diſeaſe, as thoſe Men vainly imagine.

But ſays *Junckerus* again; *this* Paris *Diſeaſe is not contagious, nor does it arrive at the Malignity of a* Dyſentery. Theſe accurate Dividers are the firſt, I think, that ever ſuppoſed Malignity an eſſential part of a *Dyſentery*. Every Diſeaſe is untractable (or malignant

lignant) in ſome Time of it or another; but more than this was never meant by that figured Speech we often find in Books of Phyſick. And as to the Contagion of a *Dyſentery*, we all know that Phyſicians widely differ as to a *Dyſentery* being communicated from one Man to another; and we likewiſe know that the like Doubt is entertained of the Contagion of the *Paris Dyſentery*, as of any other; and therefore, if it is material to diſtinguiſh between the *Paris Dyſentery* and another *Dyſentery*, *Stahl* and *Juncke-rus* have not in this Article ſettled a diſtinctive Mark. The attempting this Diſtinction is plainly abſurd, the *Paris Diſeaſe* being truly a Species of a *Dyſentery*.

Another refined Difference between a *Dyſentery* and the *Pariſian* Diſeaſe, is, that this (a Dyſentery) never is but in *Autumn*, or the latter end of *Summer*; whereas, the firſt is to be met with in any Seaſon of the Year: A mighty nice Diſtinction, but a meer Conceit, altogether contrary to the Hiſtory of Phyſick. Should a Man meet with Blood in liquid Stools (as every Phyſician has) in the Winter, or Spring, eſpecially in *Paris*, this cannot be a *Dyſentery*, becauſe that is an autumnal Diſtemper. Surely thoſe Authors think Phyſicians as ſtupid as their Patients; to have Deſcriptions offered them, and Differences of Diſeaſes equally barbarous and

falſe;

falſe; and therefore I do not mention his third Difference.

In explaining the Symptoms of a *Dyſentery*, I added from Experience, that the *Blood is mixed with the liquid Excrements*. *Galen* was ſenſible of this Fact, though he thought it, perhaps, no conſtant and eſſential Symptom, and did not add it in any Deſcription he gives of a *Dyſentery*; but rather ſays, that the Blood thus mixed with the Stools, denoted the pretended *Ulcer* to be in the ſmall and thin Inteſtins. His Words are, [a] *But when you perceive that Blood is alſo voided, you muſt conſider it, whether it be mixed with the Stools, or that a part ſwims upon the Stools:* For if the Blood is mixed *with the Stools, it ſhews that the Ulcer is in the higher Inteſtins*; but if it *ſwims upon the Stools, then the Ulcer is in the loweſt Inteſtins.*

On the other hand, this Symptom is an eſſential and inſeparable Symptom of a *Dyſentery*, both in Experience and Reaſon; though neither *Galen* nor any other Phyſician have with due Care attended to it. In Reaſon it cannot be otherwiſe; for if we conſider why the Blood is mixed with the Excrements in the *Ileum* and upwards, there is the ſame Reaſon for its being mixed with

[a] De loc. Affect. lib. 6. cap. 2.

liquid Excrements in the *Colon* and *Rectum*. For let us consider *Blood* discharged into the *Guts*, in which are *liquid Excrements*; it is plain both of them must be mixed together; because the Blood, together with these Excrements, are protruded by the peristaltick Motion of the Guts; but this peristaltick Motion is sufficient to protrude the Blood and Excrements along the *Guts*, in all their various Windings, which in many Places ascend in an Angle, near to a right Angle. Now, as in this Case, the *Blood* and *Excrements* cannot be driven along the *Guts*, without being mixed together; consequently, the *Blood* and *liquid* Excrements will always be mixed together, while they are in the *Guts*, and can be affected with their *peristaltick* Motion; and therefore the *Blood* and *Excrements* are equally mixed together in the *Rectum*, as in the *Jejunum*, *h. e.* the *Blood* is always mixed with the liquid Excrements in the Case of a Dysentery. Hence we may now collect a perfect Definition of a *Dysentery*, viz.

It is a Flux, with Griping and Pain over all the Belly, wherein is voided Blood, mixed with liquid Excrements; and with them are sometimes a mucous or slimy Substance, and sometimes a Substance more fleshy.

This Definition is so perfect, that it not only is truly drawn from Nature, but it likewise

wiſe diſtinguiſhes a *Dyſentery* from every other Diſeaſe, wherein *Blood* is to be met with in the *Guts*. We formerly were taught how to diſtinguiſh the *Dyſentery* from a *Teneſmus*; and I will now teach Phyſicians how they may diſtingniſh a *Dyſentery* from the *Piles* or *Hemorrhoides*; which is as neceſſary to be known, as their Practices are oppoſite to one another; becauſe great Errors have been committed in the Practice of a *Dyſentery*, and of the *Piles*, Phyſicians not being able to diſtinguiſh between theſe Diſeaſes.

As therefore the *Blood* in a *Dyſentery* is mixed with liquid Excrements; ſo *Blood* coming from any Perſon at Stool, which is not mixed with the Excrements, is not a *Dyſentery*, but flows lower than the *periſtaltick* Motion of the Guts has any Power; and Blood thus voided is from the *Hemorrhoidal* Veſſels, and is the *Hemorrhoids* or *Piles*. This Blood is always to be ſeen, ſometimes under the Excrements, and then the Blood precedes it; but moſt commonly the Blood falls of one ſide, or lies a top, of the Excrement; in that caſe, the Blood flows along with the Excrements, or flows longer than we go to Stool.

I will give a few Inſtances, whereby the Uſefulneſs of determining the diſtinguiſhing Symptoms of like Diſeaſes, eſpecially, will appear. And firſt *Eugalenus*, an excellent Obſerver

Obſerver of what paſſed under his Hands, tells us of a new Symptom of the Diſeaſe he calls the *Scurvy*, which is a [a] *Dyſenteria Mendax*, a Diſeaſe or Symptom no where to be heard of among accurate Obſervers in ancient Times; but what indeed is the *Piles*, as I have lately explained both. If then the Cure of the *Piles* differs from the Cure of a *Dyſentery*, we muſt be hugely miſguided by this lying *Dyſentery*. But that the Symptom is the *Piles*, we may learn from his own Words. *Quibus Sanguis craſſus & fæculentus in Venis abundat, iis Venæ in Inteſtinis deſinentes, ſæpenumero ſanguinis aliquid cum his Dejectionibus effundunt, Excrementis non permixtum, ſed ab his ſeparatum, atque abſque omni lancinatione deſcendens; manifeſta a Dyſenteria Differentia.*

It is very plain by this Deſcription of *Eugalenus*, that his Symptom is not any Kind of *Dyſentery*, but the *Piles*, in the very manner I have diſtinguiſhed that *Diſeaſe* from a *Dyſentery*. It has been the Fate of that worthy Phyſician to give us a great many excellent Deſcriptions under falſe Titles. Perhaps his whole Book is of this kind; the very leaſt part of it concerning the *Scurvy*; which no Phyſician has theſe hundred Years conſidered. Other Phyſicians, who are wiſer

[a] Pag. 30.

than to collect what passes before them, but that are taken up with Prejudices and Conceits of their own, confound Nature, and give us false Pictures of her.

Authors have found it very difficult to find out the distinguishing Mark of the *Piles*, and of a *Dysentery*. [c] *Crato* gives us this false Difference, *In eo est Discrimen : in tali fluxu Hæmorrhoidum semper sanguis præcedit Fæces : in Dysenteriâ vero vel post, vel cum fœcibus excernitur.* The first Part of this Account is very true, the last Part of his Account is very false ; and from the whole arises great Confusion. *Crato* gives many other Marks, which I do not mention, because they are altogether precarious and conjectural.

Baglivi, who is a great Plunderer of Authors, [b] gives us the same very Account of *Crato* ; and consequently both are found false by comparing them with Nature. *Juncke rus*, and Dr. *Stahl*, who likewise are greater Copiers of Books, than of Nature, tell us, [c] that a *Dysentery is graphically counterfeited by the Piles ; that they often impose upon Physicians ; but may be easily distinguished from a Dysentery by the following Marks.* We know what Author Dr. *Stahl* graphically counterfeits; but we will

[a] Consil. [b] Lib. i. prax. [c] Tab. 52. Conspect.

find

find that his Marks ſet us wider of our Purpoſe than before.

The firſt Difference and Mark the mentioned Dr. ſet between a *Dyſentery* and the *Piles*; *In Dyſenteria ordinarie aliquid ſpumidæ & ulceroſæ ſimilitudinis apparet, in Hæmorrhoidibus nihil hujus reperitur.* This Difference is partly founded on the Hypotheſis of an *Ulcer* in the *Guts*, and partly on a Conceit peculiar to theſe Authors: for though exulcerated *Guts* in a *Dyſentery* is a pure Suppoſition, and nothing real, and *Pus* is very rarely to be found in the *Bloody Flux*; yet the frothy Blood is the Child of a fermenting Brain; a thing unknown either in the *Piles*, or *Bloody Flux*. In the *Diarrhœa* Phyſicians mention frothy *Stools*, but frothy *Blood* is not found among Authors; which being a Fact conſtant to ſome one of theſe Diſeaſes, could not poſſibly have been overlooked, by the diligent and ſagacious Phyſicians, in every Age of the World. The ſecond Mark that diſtinguiſhes a *Dyſentery* from the Piles, given us by theſe Phyſicians of Obſervation; *Dyſenteria eſt contagioſa: Hæmorrhoides, impeditius fluentes, non item.* This is again an empty *Hypotheſis*, formerly exploded; but the Mark muſt be falſe, becauſe we have often heard of the *Contagion* of the *Hemorrhoids*, as well as of a *Dyſentery*; and therefore this Mark,

being common, proves no Mark at all, of Diſtinction at leaſt.

The Contradiction of this third Mark to all Phyſick Hiſtory has already been obſerved, and at preſent needs not to be repeated, whether the *Piles* be ſtationary, or not, as Dr. *Sydenham* ſpeaks, and *Stahl* eccho's; it is well known, that a *Dyſentery* is not fixed to any one Seaſon of the Year.

The fourth Mark of *Junckerus* is as frivolous as any of the former. *In Dyſenteria augeſcens ſanguinis Excretio exaſperat malum, in Hæmorrhoidibus autem, quo magis fluxus ſanguinis ſuccedit eo magis ſymptomata, præcipue torminoſa, imminuuntur.* Here are as many Blunders againſt Obſervation as there are Sentences: But we will firſt ſuppoſe all his Marks are true; yet as a great Loſs of *Blood* by the *Piles* has been very fatal, Phyſicians want a diſtinctive Mark between the *Piles* and a *Dyſentery*, without Death making good the Difference, or that a ſick Perſon muſt be ſacrificed to determine a conjectural Difference: but if there ſhould not be much Pain (our Author calls barbarouſly *Symptomata torminoſa*) as it ſometimes happens; it is very plain, that we have no diſtinctive Mark. Such Differences are the *Reveries* of Men awake; but they neither agree with *Nature*, nor with other Accounts of Phyſicians; and are therefore falſe.

Thus our modern Improvers drop into Confuſion and Numbers of Errors; they neither attending to Nature, nor will they be inſtructed by Books of Phyſick, where Nature may be found livelily drawn.

But to proceed; the next Symptom is of the *Blood*, in a *Dyſentery*, being aduſt; which is a Symptom of a *Dyſentery* given us by *Hippocrates*; but which is nothing ſo conſtant, as the *mucous* and *fleſhy* Subſtances cautiouſly mentioned by *Celſus*, among the Symptoms of the ſame Diſeaſe. *Sometimes, with the Blood*, ſays *Corn. Celſus, is voided a mucous Subſtance, and ſometimes a fleſhy Subſtance*; all which Symptoms I will endeavour to explain, that we may know from whence they proceed, and how far they are truly Symptoms of a *Dyſentery*.

Aduſt Blood, in the Opinion of ancient Phyſicians, is occaſioned by its remaining longer than ordinary either in the *Liver*, or in the *Spleen*; and is ſuppoſed to be mixed with melancholy Humours. This Blood is of a very *bright Redneſs*; which, on that Account, was thought to be *burned*, and in the Language of Dr. *Sydenham* and ſome other Phyſicians, is *inflammatory* Blood. It is this Kind of Blood *Hippocrates* obſerved to be voided in a *Dyſentery*. This is often the State of the *Blood* when Men are ill of a *Dyſentery*; and this aduſt Blood

always denotes a Thickneſs of Blood greater than natural, if the bright Colour is not acquired in the Guts themſelves, by being mixed with *acid*, or other *Liquors*; that we know will raiſe the Colour of the *Blood*. But if the *Blood* has not become of a ſhining Redneſs in the *Guts*, but is thicker than natural; in that Caſe thicker *Blood* driven along the *Arteries* muſt break through ſome of the ſmalleſt of them, if the *Momentum* of the Blood's Motion is natural; and conſequently Blood muſt be diſcharged into the *Guts*: But this Blood is ſuppoſed ro run into the *Guts*, by breaking through its weaker Veſſels, and that by its Thickneſs; and thick Blood, before it corrupts, being of a bright Redneſs, or being *aduſt*; it is now manifeſt, why *aduſt Blood* is often found among the Stools in a *Dyſentery*.

It was from a very different Conſiſtence and Colour of Blood, when, *viz.* it is *thin*, *pale* and *watry*, like the *rinſing* and *waſhing* of Fleſh, that [a] *Trallianus*, and other Phyſicians after him, conſtitute a Species of a *Dyſentery*, under the Name of *Fluxus Hepaticus*, or, *the Liver-Flux*. This *Colour* of Blood ſhews, indeed, its Poorneſs, and that it has gone many Degrees from the natural and due Conſiſtence and Colour of

[a] Lib. vii. cap. xxi.

Blood;

Blood; but it does not in the leaſt denote any Defect of the *Liver* in not preparing the Chyle, and manufacturing it into more perfect Blood. This is obvious to every Phyſician in this Age, who have the plaineſt Demonſtration againſt the Chyle paſſing into the *Liver* directly from the Guts, as even *Caſper Aſellius* imagined; and are firmly perſuaded, that it is not the Duty and Office of the *Liver* to turn the *Chyle* into *Blood:* And therefore the *Liver-Flux* is no Species of a *Dyſentery*, tho' many good Authors retain the Name, while they explain the inward *Piles*, or *Hemorrhoids*.

Among the Symptoms of a *Dyſentery* we find there are Skins in the Stools, and the great Phyſician *Cornelius Celſus* tells us, that, ſometimes, there may be found a fleſhy Subſtance among them; both which Appearances I am now to explain; for thereby we may know how, and when, to cure a Dyſentery, under the mentioned Circumſtances; at leaſt we may know how far a Remedy may be ſucceſsful. As for the *Skins* that are found among the Stools, we may be apprized of them by calling to mind what was ſaid, in the ſecond Chapter, of the Structure of the *Guts*; for tho' in a large Senſe they ſeem to be a Compoſition of ſeveral skinny Subſtances, and in a proper Senſe, their inner Coat (which we principally

conſider on this Occaſion) is a Structure of *Blood-veſſels*, whoſe Coats are membranous. Now the griping Cauſes, we have already found in a *Dyſentery*, can both ſwell and corrode theſe Membranes; in both which Caſes, the Slough of theſe Membranes, or Bits of Skins, may be thrown off the fourth and inner Coat of the Guts, and be mixed with the Stools. And therefore it is that Bits of Skin are mixed with the Excrements, and voided together with them in the Courſe of a *Dyſentery*.

Indeed, we do not only find ſmall Parcels of this skinny Subſtance among the Stools; but even large Pieces of the inner *Coat* of the *Rectum* it ſelf has been voided with the Stools of a Dyſentery, as I ſhall hereafter relate, among the Caſes and Obſervations.

But if we conſider, in the next Place, the inner *Coat* of the *Guts*, not only diveſted of its defending *Mucus*; but that a Part of their Subſtance, is even thrown off in *Skins* and *Slough*, as I have ſhewn; as alſo that theſe ſharp Humours are ſtill in their Vigour, corroding the *Guts*, we cannot doubt of the *Ichorous* Diſcharge we frequently meet with, nor of the *Fungous*, and even *Carcinomatous* Subſtances, we find ſometimes voided among the Excrements in the Courſe of a *Dyſentery*; however difficult a *Dyſentery* is

on

on these Occasions to be cured, as *Hippocrates* asserts; and the Nature of the Thing must prove to those, who have not had Difficulties of this Kind to contend with.

Having thus explained the most essential Symptoms of a *Dysentery*, which have informed us of its Nature; and will hereafter guide and direct us in the best Methods of curing a *Dysentery*; I must proceed with modern Authors, and explain some other Symptoms that happen, only by the long continuing of the Disease; though they are not strictly and properly any Part of a *Dysentery*.

When a *Dysentery* has lasted any considerable Time, there is a *loss of Flesh*. *Hippocrates* informs us, that [a] *a loathing of Food*, and *a loss of Appetite, are very ill, when a Dysentery has lasted a considerable Time*; but it is still worse, when a *Dysentery* is attended with a *Fever*. The *Guts* are often *inflamed*, thin, *schirrous*, and sometimes mortify; and a *Dysentery* ends in *Death*.

And first, *the loss of Flesh*, so common in a *Dysentery*, after it has lasted a considerable Time, is manifest from what has already been said of a *Diarrhœa*; there being the same Reason for both, as far as that Symptom is produced in both, under the like Cir-

[a] Aphor. 3. Sect. vi.

cumstances.

cumſtances. Yet in a *Dyſentery*, the Sick *loſe* their *Fleſh* on another account; for not only the Supplies that recruit the natural Evacuations are carried off, before they reach the Blood, and great and preternatural Secretions are made out of it, at the ſame time it is deprived of the mentioned Supplies, which is the Caſe in a *Diarrhœa*; but *Blood* it ſelf is diſcharged into the Guts, and voided with liquid Excrements in a *Dyſentery*. And therefore the Veſſels of the Body, more particularly the *Blood-veſſels* of the Muſcles, being drained of Blood, they are thinner and not ſo plump, *h. e.* the Sick of a *Dyſentery* grow *lean*, and *loſe* their *Fleſh*.

Hence we may collect the Truth of this *Aphoriſm* of *Hippocrates*, that a loathing of Food, after a long continued *Dyſentery*, is ill; but worſe, when with them there is a *Fever*: For the Sick avoiding their *Food*, are deprived of the common Supplies of the Blood, which are at this Time, even more neceſſary than in Health; the Diſcharges from the Blood being greater than natural. But the Sick loathing their Food, in a *Dyſentery* that has laſted for ſome time, is very ill, becauſe they are thereby deprived of their neceſſary Support; without which they cannot ſubſiſt. Beſides, there is a *Fever* which encreaſes this abhorring of Food, encreaſes the *Dyſentery*, and it ſelf weakens the Sick

of a *Dyſentery*. And therefore it is a very ill State of a *Dyſentery*, when there is along with it a *Fever*, and a *loathing* of *Food*.

Phyſicians have likewiſe obſerved, that the *Guts* are *inflamed*, when a *Dyſentery* has laſted for any conſiderable Time. This will be manifeſt, if we remember but one common Symptom of a *Dyſentery*, and ſome of the Conſequences of it, we formerly mentioned; this is the *Griping* in a *Dyſentery*; whereby the defending *Mucus* of the *Guts* is thrown off in great Abundance, and they left bare, expoſed, againſt the Proviſion of Nature, to all the ſharp and griping Liquors, and rough Subſtances, that paſs along them. But theſe ſharp Liquors, and rough Subſtances inflame membranous Parts; and are continually paſſing the *Guts*, as we know by the conſtant Griping. It is therefore evident, how the *Guts* are often *inflamed*, in the long Courſe of a *Dyſentery*.

In a *Dyſentery*, the *Guts* are found thinner than natural. This Symptom is more conſtant in a *Dyſentery* of a long ſtanding, than the former of an Inflammation. The *Thinneſs* of the Guts may proceed, from their being deprived of their *Mucus* only. But this *Thinneſs* is more particularly cauſed, by the general Decay of *Blood* over all the Body. Now there being a ſmaller Quantity of Blood than natural, in the *Veins* and *Arteries*, their inward

inward Surfaces muſt come nearer and nearer to one another, and theſe *Veins* and *Arteries* will be thinner; and that according to the Waſte of Blood that is made out of theſe Veſſels. And therefore in a *Dyſentery*, the Blood-Veſſels in the Guts being thinner, the *Guts* themſelves muſt likewiſe become thinner than natural, as is often obſerved. The ſame reaſoning holds as to the *muſcular* Coat of the *Inteſtins*, and of their moſt membranous Coats; the Sides of theſe Veſſels, whereof theſe Coats are compoſed, approaching nearer to one another, even to their Surfaces touching one another, by the Loſs of their different Liquors by a Dyſentery. And it is therefore evident, why the *Guts* are often worn very *thin*, by the laſting of a *Dyſentery*.

It is by the continuing of a *Dyſentery* that the *Guts* are, ſometimes, found to be *ſchirrous*; for after the Force of the circulating Liquors is vaſtly weakned, the Liquors in the ſmall and inflected Veſſels of Glands readily flow ſlowly, and totally obſtruct the Veſſels of the *Glands*. But in a *Dyſentery*, the Blood paſſes more frequently through the *Glands* and *Blood-veſſels* of the *Guts*, and that becauſe of the great *Stimulus* and *Griping* in that Diſeaſe. And therefore, when the *Impetus* of the *Blood*, and of the circulating Liquors is very much leſs than natural,

the

the Blood and circulating Liquors ſtop in the ſmalleſt and moſt inflected Veſſels; and thereby the Bulk of the *Glands* is encreaſed, *h. e.* they are tumid and ſwelled. Moreover, when *Glands* are obſtructed, or that there are *Tumours* formed by theſe Obſtructions, the *Tumour* is more or leſs hard, as the Liquors flow together through the Gland; or that the thinner Parts of thoſe Liquors flow in a greater Proportion, than the harder and groſſer Parts of them. In this Caſe, the *Tumour* is very hard, or it is ſchirrous. It is then very manifeſt, under what Circumſtances of a *Dyſentery*, and in what Time of this Diſeaſe it is, when a *Schirrus* is formed.

Phyſicians have likewiſe found the *Guts*, of thoſe that dye of a *Dyſentery*, *mortified*. This Accident evidently happens in the Time of dying; for as the *Guts* are ſometimes *inflamed* in a *Dyſentery*, as has already been ſhewn, ſo this great Quantity of Blood (which is always, when any Part is inflamed) corrupts and turns black; which is a *Mortification*. And therefore it is evident, that a *Mortification* is in a *Dyſentery*, when the Guts are inflamed, and the Sick die under theſe Circumſtances of the Diſeaſe.

From this we may be ſenſible of the Falſeneſs of Dr. *Baglivi*'s Aſſertion, who tells us, that the *Guts* of all that die of a *Dyſentery* are always mortified; which

Aſſertion

Assertion contradicts all Experience; and we now see the Circumstance of a *Dysentery*, when the *Guts* are *black*; which *Blackness* is not a Cause of the *Death* of the Sick, but ensues upon it. This is more particulary certain, if the *Dysentery* continues, till a little Time before the sick Person expires; for, in that Case, there cannot possibly be a *Mortification*, let the *Guts* appear ever so *black*, or mortified, after the sick Person is dead. I desire Physicians would be very attentive to what I observe on this Head; because I have found several Physicians of Character in this Town, to have fallen into this Mistake; and that I have often cured their Patients, after these supposed Mortifications of the *Guts*; which had been impossible, if the Guts had been really mortified.

To conclude; it will seem unnecessary to assign a Reason for *Death* concluding these miserable Symptoms. For in a *Dysentery*, not only immense Quantities of secreted Liquors are discharged from the Blood; and the Recruits of the Blood are carried off, as formerly, in a *Diarrhœa*; but *Blood* it self, and with it our Life, are poured out in the present Case; or, *Death* often puts an End to a *Dysentery*.

CHAP.

CHAP. XIII.

The Causes, commonly assigned, of a DYSENTERY.

HIppocrates observes, that [a] *the Air is hot and sultry*, when Men are most obnoxious to a *Dysentery*. People are ill of a *Dysentery* by drinking *spirituous Liquors*; and People of a *bilious* Constitution are subject to a *Dysentery*; and *Hippocrates* ranks [b] *black Gall* among the Causes of a *Dysentery*. *Hippocrates* observes, [c] *that Men are most apt to have a Dysentery after they pass their Youth.* People that have the *Piles* stop upon them, often have a *Dysentery*. *Women* sometimes have a *Dysentery* by *stopping* their *monthly Courses*. *Hippocrates* likewise assures us, that [d] *Men* have fallen into a *Dysentery* for the Loss of a Limb. A *Diarrhœa* occasions a *Dysentery*.

First then, *hot* and *sultry Air* can variously affect the *Blood* so as to make it burst its Vessels. At present I will only insist on the most ordinary Manner the *Blood* is in-

[a] Aphor. 16. Sect. iii. [b] Aphor. 24. Sect. iv. [c] Aphor. 30. Sect. iii. [d] Lib. iii. de victûs rat. pag. 345, 346.

fected,

fected by *hot* Air, when it breaks through its Veſſels, leaving the reſt to be farther explained in the *Animal Oeconomy*, or as they occur in other Diſeaſes. *Sultry* and *hot* Air then rarifies the *Blood*, a Liquor that admits of being greatly rarify'd: But the *Blood* thus rarify'd, by *hot Air*, diſtends its Veſſels, and is the Cauſe of their *burſting*. This more readily happens when either the Seaſon changes from being very *cold* to be very *hot*, and that of a ſudden; or that People change their Climate from *hot* to *cold* very quickly. Now the *Blood-Veſſels* of the *Guts* being naturally weak, or becoming ſo by the loſs of their *Mucus*, or the *Sharpneſs* of their Liquors, the Mouths of the *Arteries* of the *velvet Coat* eaſily open and diſcharge their Blood into the *Guts*: And therefore *Blood* diſcharged into the *Guts*, eſpecially when they are filled with liquid Excrements, is mixed with theſe Excrements, and is voided with them; *h. e. ſultry* and *hot Air* is truly a Cauſe of this Evacuation, or of a *Dyſentery*.

Spirituous Liquors are a Cauſe, very near, of the ſame Kind; for *ſpirituous* Liquors rarify the *Blood*, and encreaſe its Velocity. By the firſt, ſpirituous Liquors are a Cauſe of a *Dyſentery*, as in the preceding Caſe. By the ſecond, the Blood being impelled with a greater Velocity, diſtends its Veſſels in a Propor-

Proportion compounded of the rarified Quantity of the Blood, and its Velocity. On this Conſideration ſpirituous Liquors are a more powerful Cauſe of a *Dyſentery* than *hot* and *ſultry Air*.

As to the People who are moſt obnoxious, naturally, to be taken ill of a *Dyſentery*, they are of a *bilious* Conſtitution; becauſe *Gall* is a ſharp and ſtimulating Liquor naturally; or one great Purpoſe of the *Gall* is to ſtimulate the *Guts*, and thus to keep up their *periſtaltick* Motion. The *Sharpneſs* of the *Gall*, then, being at any time encreaſed, we found to be the Cauſe of *Griping*, and of a *Diarrhœa*. We likewiſe have found, that this *Gall* continuing to ſtimulate wears off the *Mucus* of the *Guts*, and makes them void Blood by its Sharpneſs. People therefore of a bilious Conſtitution are very liable to be ill of a *Dyſentery*.

But *Hippocrates* obſerves that *black Gall* is a more particular Cauſe of a *Dyſentery*; which Obſervation will hold true if we find this *black Gall* ſharper than the *yellow Gall*. This Opinion of *Hippocrates* is known by comparing two different Places of his [a] *Epidemicks*. He tells us in the firſt, that they breed *yellow Gall*, who are fat; but they that are not ſo fat breed a *blackiſh Gall*. He ſays,

[a] Lib. vi. Epid. Sect. vi. *and* Lib. vi. Epid. Sect. v.

that the Blood of the Piles has a great Affinity with *black Gall*. Now as *hemorroidal* Blood was, by them, eſteemed thin, black and acrimonious; it is therefore evident, that black *Gall* was by *Hippocrates* eſteemed very ſharp and ſtimulating, but ſharp and ſtimulating Liquors being found a ſufficient and a true Cauſe of a *Dyſentery*, black Gall muſt, on that Account, be truly a Cauſe of it.

While Phyſicians mention the different Powers of *black* and *yellow Gall*, in producing a *Dyſentery*, they put a Queſtion; Why *yellow Gall* produces a *Dyſentery* in a little time, while the *green* and leek-like *Gall* is the Cauſe only of a ſimple *Diarrhœa*, that never becomes a *Dyſentery*, though it often continues for a conſiderable time? The Reaſon of asking this Queſtion is, becauſe theſe Authors ſuppoſe the *green Gall* to be more *ſharp*, by the *Aduſtion*, which they conceive to be induced upon the common *Gall*, that is *yellow*; and that a Degree of Acrimony being added to the *yellow* Gall, ſhould make it much ſharper, and more ſtimulating; yet they find this does not hold true in Experience.

I obſerve then, that this is altogether a Diſpute between an Hypotheſis and Experience. Phyſicians had ſuppoſed the *Greenneſs* of the *Gall* to be owing to its *Aduſtion*; (an unknown Quality) which *Aduſtion* is ſuppoſed

to

to render the *yellow Gall* more acrimonious than it is naturally: But it being by its greater Acrimony that it becomes the Cauſe of a *Dyſentery*, and the *yellow Gall*, before this additional Sharpneſs, could only produce a *Diarrhœa*, Phyſicians expected, that this *aduſt* and *green Gall* ſhould more effectually become the *Cauſe* of a *Dyſentery*, than the *yellow* Gall, they ſuppoſed not to be ſo *ſharp* and *acrimonious*. This is the State of their Queſtion, that the *Experiment*, eſpecially, if we conſider what is every where ſaid, deſtroys their *Hypotheſis* of the Sharpneſs of *green leek-like Gall*.

Great Phyſicians, who have been tenacious of this ancient Opinion, maintain this Hypotheſis of the *Aduſtion* of *Gall*, and that the *green*, *aduſt Gall* is truly ſharper, tho' it fails in producing a *Dyſentery* (the Effect of its Sharpneſs) and that it is produced by *yellow Gall*, which is nothing ſo ſharp, and leſs fitted, on that Account, to be the *Cauſe* of a *Dyſentery*. For this Purpoſe *Amatus Luſitanus* alledges, that there is a Viſcidity joined to the *yellow Gall*, which keeps it longer in the Guts, when it produces a *Dyſentery*; and that this is the Reaſon why *yellow Gall* (that is not ſo ſharp as the *green Gall*) is an effectual Cauſe of a *Dyſentery*.

But this Suppoſition of Viſcidity is truly precarious, and would have Conſequences of another Kind, were it applied to the *green* and pretended *aduſt Gall*; and therefore ſuch Suppoſitions do not prove any thing. It is very certain, that the Sharpneſs of the *Gall* is a true *Cauſe* of a *Dyſentery*, whether the *Gall* be *black*, *yellow*, or *green*; as alſo, that any of them may be ſharper than another, at different times, tho' the Sharpneſs is not owing to the Colour, nor does the Colour always denote the Sharpneſs of the *Gall*; and therefore this Notion of *aduſt Gall* is a meer *Hypotheſis*.

The *Cauſes* we find next aſſigned of a *Dyſentery* are *Facts* rather than *Philoſophy*, and are commonly true Cauſes, which we will therefore now examine. *Hippocrates* obſerved, that Men are moſt apt to have a *Dyſentery* after they paſs their Youth. Now, this Obſervation points out the time, when Men begin to be ſubject to a *Dyſentery*; and tho' this Obſervation does not expreſsly ſhew, and denote any *Cauſe*, yet when this Obſervation is explained, the Cauſe of the *Dyſentery*, and the Truth of the Obſervation, will appear together. The Reaſon for the Obſervation I gave long ago, when I treated of the [a] Cauſe of Women having monthly Courſes,

[a] Oeconom. Animal. pag. 130.

and

and why they come upon them at a certain time: For when the Veſſels of a Man are as fully explicated and unfolded (eſpecially in their Length) as the Force of his Blood can unfold them, then it is he begins to be a Man; then it is that an Error in the *Thickneſs* and *Quantity* of the Blood becomes ſenſible, while the *Velocity* of the *Blood* continues natural, and the ſame. And, on the other Hand, an Error in the Blood's *Velocity* becomes perceptible, while the *Quantity* and *Thickneſs* of the *Blood* are natural. In either of theſe Caſes we found that the Veſſels may be ſo ſtretched, and diſtended, as to be broke through, where either they are naturally, or by ſome other Defect, moſt weakly, tender, and leaſt reſiſting: And therefore it is, that Men become more ſubject to a *Dyſentery*, when they have paſſed their Youth. This might be ſhewn at greater length, and in more Particulars; but that it may be found already done in the learned Dr. *Freind*'s excellent Book, his *Emmenologia*.

From this Account we will eaſily learn, why *Women* are ſubject to a *Dyſentery* by their *monthly Courſes* ſtopping. One *Woman* with another voids about eighteen Ounces of *Blood* in the Courſe of a Month, or thereabouts: A *Woman*, then, that has not her monthly Courſes, in ſome Months, has, at

leaſt this Quantity of Blood greater than natural, other natural Evacuations being the ſame; though the Quantity of Blood may be double, or triple, the Quantity of Blood retained for the Time of the Suppreſſion. Now the Quantity of Blood, greater than natural, will ſtretch and break through its Veſſels that are naturally weak, or defective. But the *Arteries* of the velvet Coat of the *Guts* terminating in it, are eaſily opened, eſpecially when they are diveſted of their Mucus, or corroded. And therefore a great Diſcharge of Blood into the Bowels eaſily happens, when the Quantity of Blood is encreaſed, *h. e.* this Diſcharge of Blood is very manifeſt, and eaſy to be conceived, while *Women* have not their monthly Courſes. What is ſaid here may, by proper Changes, be applied to another Obſervation of Phyſicians; that People accuſtomed to have the bleeding *Piles*, are ſubject to a *Dyſentery*; when the Piles are ſtopped upon them.

But, to ſpeak my Opinion freely, it is plain enough, that there may be an *Hemorrhage* from the *Blood-Veſſels* of the *Guts*, upon any common and accuſtomed Evacuation of Blood diſcontinuing; yet we may very much doubt of its producing a *Dyſentery*; *h. e.* the going of liquid Excrements, with which this Blood is mixed, and together expelled

expelled and voided out of the Guts. And therefore it is, that in all ſuch *Hemorrhages*, we commonly find a ſmall *Griping* precedes, and creates a Deſire to go to Stool, when nothing beſides Blood is voided. But this ſhall be farther conſidered in the next Obſervation of *Hippocrates*, and of other Phyſicians, that Men are ſubject to having a *Dyſentery* after the Loſs, and Amputation, of a *Leg*, or of an *Arm*.

Not only *Hippocrates*, but almoſt every Phyſician (even after the Diſcovery of the Circulation of Blood) thought a *Dyſentery* unavoidable, after the Loſs of a *Limb*; as that were the readieſt Way to diſcharge the daily Proviſion made for a Limb, that is now no more. Moreover, *Hippocrates* not only thinks a *Dyſentery* unavoidable, but uſeful and neceſſary, [a] *They*, ſays he, *who have ſuffered an Amputation, we may hope, will ſoon after have bloody Stools.*

Indeed, if there truly was ſuch an extraordinary Quantity of Blood in the Body, after Amputation, as is ſuppoſed in the preſent Caſe; then an *Hemorrhage* ſhould not only be unavoidable, but uſeful and neceſſary too; as *Hippocrates* wiſhes, for the Relief of Nature, and the preventing a Diſeaſe. For if the Blood could not otherwiſe be diſ-

[a] Lib. de Articulis.

charged, than by an *Hemorrhage*, frequent Hemorrhages ſhould be neceſſary after Amputation; nor could they be avoided. The laſt is evident, from what has been ſaid, concerning the Courſes of Women; ſo is the firſt, if we conſider, the Perſon without a Limb eats as much, and breeds as much Blood, after an Amputation, as before he loſt a Limb. Now, if the Obſervation were commonly true, it would not only be neceſſary to have a *Dyſentery*, after an Amputation, but ſuch *Dyſenteries* ought to be repeated.

Phyſicians could not imagine, how this unneceſſary Quantity of Blood was diſpoſed of; nor can I conceive, how one Fit of a *Dyſentery* could remedy the Conſequences they apprehend, and therefore I will, next, explain this Difficulty; whereby we may learn, that there is not any Neceſſity for a *Dyſentery*, or for an Hemorrhage of any Kind, for the *Safety* of a Perſon, who has loſt a Limb; and as there is no Neceſſity for any *Hemorrhage*, we need not be anxious about a Proviſion, we find Nature ſeldom, or never makes. So this Explanation will be more a Relief to the *Surgeon*, than to the *Sick*, who truly wants it the moſt of the two; if ever we may think Men want Knowledge.

Theſe

Theſe Things will become evident, if we conſider the Quantity of Blood that is loſt by the amputated Limb, and the Proportion of the recruiting Aliment, that daily went for the daily Support of the Limb, that is amputated. Let this amputated Limb be a *Leg*, and that *Leg* a fourteenth Part of the whole Body; it is then evident, that by the Loſs of a *Leg*, there is gone off with it one fourteenth of the whole Maſs of *Blood*, that Leg having its Share of the whole Maſs. So that there is not any Superfluity of Blood, or any new *Plethora*, by the Amputation. Moreover, the daily Supply that is made for this amputated Leg, is likewiſe a fourteenth of the common Supply for the whole Body; but this, according to *Sanctorius*, is about ſeven Pound in *Meat* and *Drink*; the daily Supply, then, of the Leg, is half a Pound; which in a few Days ſhould encreaſe the Quantity of Blood, even to a Plethora.

But we muſt grant, that the *Diet* of a Perſon, under the Circumſtances of an Amputation, is not only leſs in Quantity, but it is likewiſe leſs nouriſhing; ſo that this *Plethora* muſt be longer in making, though in double or treble the Time a *Plethora* muſt be; and ſooner, after the Perſon is reſtored to his Health, and lives again as he did before the Amputation; which *Plethora* ſhould ſubject ſuch a Perſon often to a *Dyſentery*; which as much

much contradicts Experience, as the former does our Reaſon.

Hippocrates conceives this whole Affair after this Manner. Theſe are the Conſequences of a *Fulneſs*, in thoſe who digeſt their Food well, but whoſe *Fleſh* does not receive it. It daily heats and diſturbs the Body, and occaſions a *Looſneſs*; thus it is called, while the Food only corrupts, and is voided by Stool. But when the Body is heated, and ſharp Excrements are purged off, the *Guts* are corroded and exulcerated, and unconcocted Aliment is voided; and this we call a *Dyſentery*.

However this may be, it is now very certain, that there is not any *Plethora*, or exceeding Quantity of Blood, accumulated by the Amputation of any Limb, which the ſuppoſed *Dyſentery* is wanted to cure. This ſhould become more manifeſt and ſatisfactory, by ſhewing, from the *animal Oeconomy, that the Blood's Quantity can never be encreaſed to a* Plethora, *for above twenty four Hours, while the Fluidity of the Blood is natural and unchanged.* This Propoſition is evidently of the greateſt Uſe, for underſtanding, and curing, Diſeaſes; and it wholly deſtroys all theſe imaginary Encreaſes of Blood, that are commonly ſuppoſed. This likewiſe ſhakes the fundamental Principle of *Bellini's Theory* of *Fevers*; and altogether

deſtroys

deſtroys that of Dr. *Cheyne*; which is taken from the learned and elegant *Laurentius Bellini.*

But before I leave this Subject of a *Dyſentery*, the *critical Dyſentery* of *Hippocrates* muſt not be neglected. All Authors take Notice of *epidemick Dyſenteries*, that have depopulated Countries, and that are not only *Diſeaſes*, but that have likewiſe been the *Symptoms* of ſome other Diſeaſes that were popular and epidemick. [a] In the Summer the *Bloody Flux* was epidemick; and ſome of the Sick, who likewiſe bled at Noſe, ended their Diſtemper after this Manner, for they fell into the *Bloody Flux*; as it happened to *Myllus Eration*'s Son, who fell into the *Bloody Flux*, after great bleeding at Noſe; and all were delivered from all Danger: Among theſe were *Bion*, *Cratia*, *Areton*'s Son, and the *Wife* of *Meneſiſtratus.*

Hence we may account for all the ill Conſequences that have attended the improper and untimely ſtopping a *Dyſentery*, which Phyſicians have recorded in their Books. Does a *Dyſentery* diſcharge an exceeding great Quantity of Blood? And is the Blood thereby reduced, not only to its natural Quantity, but to its natural Fluidity? A Cure then of this Kind is the productive Cauſe of theſe Diſeaſes, that conſiſt in a Quantity of Blood, greater than natural: Such

[a] Lib. i. Epidem. Sect. 2.

Such are a *ſpitting* of *Blood*; a *Pleuriſy*; a *Mania*; an *Apoplexy*, &c. And therefore, Phyſicians ought equally to be qualified, how to diſtinguiſh between a *ſymptomatick* and a *critical Dyſentery*, as between a *ſymptomatick* and a *critical Diarrhœa*; eſpecially, that the ill Conſequences of the former, are more ſudden, more terrible, and as fatal, as thoſe of the laſt; Though, hitherto, we find little or no mention of this Kind of a *Dyſentery* in Phyſick. Theſe prudential Adminiſtrations are ſtill in Obſcurity; and Phyſicians have only *pretended* to this diſtinguiſhing Skill, by ſuggeſting that others were not poſſeſſed of it.

But to finiſh the Cauſes of a *Dyſentery*; we find that a *Diarrhœa* is often the Cauſe of a *Dyſentery*; or, which is much the ſame, that a *Diarrhœa* has become a *Dyſentery*. The Reaſon is evident; their ſtimulating Cauſes are common; the *Sharpneſs* of *Gall*; the *Sharpneſs* of *unripe Fruit*; the *Sharpneſs* of *unconcocted*, and *corrupted*, *Food*. And therefore, the *Sharpneſs* or Acrimony of theſe Cauſes, or of any of them, being encreaſed, is the *Cauſe* of a *Dyſentery*. So that a *Diarrhœa*, produced by ſtimulating *Cauſes*, differs only in Degrees from a *Dyſentery*, which is likewiſe produced by the ſame Cauſes; but with a greater Degree of *Acrimony* and *Sharpneſs*. And therefore,

fore, in that Senſe, a *Diarrhœa* is truly, and properly, a *Cauſe* of a *Dyſentery*.

CHAP. XIV.

The Cures of a DYSENTERY.

A *Dyſentery* has been commonly reputed the *Looſneſs* moſt difficult to be cured; and Phyſicians ſeem rather to ſpeak from their Fears, than their Experience, when they ſay ſo. For, in the whole foregoing Account, there is nothing plainer, than that a *Dyſentery* conſiſts in one Thing only, which is likewiſe common with it to a *Diarrhœa*, though in a greater Degree in the firſt. This is the *griping*. And therefore the *Indications*, for curing a *Dyſentery*, are the ſame with thoſe for curing a *Diarrhœa*; as we find in Experience, and in the Practice of Phyſicians. *Vomiting* and *purging* Medicines are not of any different Uſe here, than they were formerly when they were recommended, for curing a *Diarrhœa*: They are to carry off the

the ſtimulating Subſtances, that occaſion the *griping*, as they did before in the former Diſeaſe.

Indeed, *bleeding* is more peculiar to the Cure of a *Dyſentery*, than can be alledged, when it was formerly recommended in the Cure of a *Diarrhœa*. [a] *Hippocrates* informs us, that the Wife of *Epicharmus* was ill of a *Dyſentery*, before ſhe was brought to Bed: She had *griping*, and her *Stools* were mucous. But ſhe got well ſoon after ſhe was delivered. *Galen*, *Alex. Trallianus*, *Aetius*, and all other Phyſicians, have commended *bleeding* for curing a *Dyſentery*.

Aſtringent Medicines are not only chiefly depended on, but promiſe ſomething particularly, in the Practice of a *Dyſentery*.

Diuretick Medicines are even as highly recommended for the Cure of a *Dyſentery*, as they were for curing a *Diarrhœa*. But as theſe Medicines cannot, under any Circumſtance, and in any Caſe, of a *Dyſentery*, ever be found uſeful; it is very manifeſt, that Phyſicians may pretend to follow Experience, and to make Obſervations; but that this Practice of *Diureticks* ariſes from neither: I ſhewed, *formerly*, that the Practice of *Diureticks* for curing a *Diarrhœa*, was a falla-

[a] Progn. 2.

cious

cious Inference, drawn from an Obſervation of *Hippocrates*, that was it ſelf very true; but I demonſtrated, at that Time, that *diuretick* Medicines could not cure any kind of *Diarrhœa*; and it is now evident, that it cannot be pretended, that they are proper Means for curing a *Dyſentery*. All this Reaſoning is not only confirmed by the Experience brought in the mentioned Chapter; but it is the poſitive and expreſs Experience of *Cornelius Celſus*, *that the Medicines that provoke a great Quantity of Water are uſeful, by turning the Humour on another Part, when they can have that Effect; but they certainly encreaſe the Diſeaſe*, when they do *not occaſion a Quantity of Urine. And therefore they muſt not be adminiſtred to any Perſon, whoſe Urine is not eaſily forced.*

On all theſe Conſiderations, it is altogether unneceſſary to give any farther Explanation, how *vomiting* and *purging* Medicines cure a *Dyſentery*; when it proceeds from, and is occaſioned by, Subſtances that ſtimulate the *Guts*, and occaſion *griping*. The Reader will find that already done in the Practice of the *Diarrhœa*; I ſhall, at this Time, barely mention the *purging* Medicines more particularly recommended, for curing the *Dyſentery*; and, hereafter, I will conſider *bleeding*, and *aſtringent* Medicines, as they more

more eſpecially are wanted for the *Cure* of a *Dyſentery*.

To proceed; as *vomiting* and *purging Medicines* are Remedies of a *Dyſentery* and of a *Diarrhœa* equally; ſo, that I may not repeat the Forms already recorded, I deſire my *Reader* to have recourſe to that Place. However, I cannot neglect the mentioning an Opinion of *Galen*, who doubts of the Safety of *purging* Medicines, in curing a *Dyſentery*; who, notwithſtanding, recommends *Rhubarb* as a moſt uſeful Medicine for that Diſtemper. It was the binding Quality of that Drug, he thought, moſt conſiderable, without having any Regard to its purging. [a] *Moreover*, ſays *Galen*, *the binding of Rhubarb is very powerful, as we may learn from the great Benefit they that ſpit Blood, and they that have a Bloody Flux, or the Cœliack Affection, receive from it.* [b] *Paulus Ægineta* confirms or copies this Opinion and Experience of *Galen* in his Works. It ſeems then, that *Galen* gave *Rhubarb* in the Caſes of *Hemorrhages* in ſo very ſmall a Quantity, that he was not ſenſible of its purging Quality; and we may doubt, whether he knew this its Power and Faculty of purging.

[a] De ſimplic. Medicament. facultat. lib. viii. [b] De Arte Meden. lib. vii.

Whether *Galen* was apprized of the purging Quality of *Rhubarb*, is not the Queſtion at this Time; but as purging is always uſeful, when there is *griping*; if the Strength of the Sick admits of an evacuating Medicine, we may recommend a Purge of *Rhubarb* among the beſt and ſafeſt of the Kind.

Phyſicians in former Times avoided the beſt evacuating Medicine, when it was more likely to deſtroy (or in the modern Cant) to carry off the Sick than his Diſeaſe; and therefore either contented themſelves with a Purge of *Milk*; or, which was very common, to give Clyſters that waſh the *Rectum*, and carry off the *Stimulus*, without the Sick risking any thing in their Life, and Strength. This was the Practice of all prudent Phyſicians in former Times. *Hippocrates*, *Galen*, *Oribaſius*, *Vander Heyden*, Dr. *Sydenham*, and his Follower *Baglivi*, have found theſe ſafe Methods often uſeful. Yet many, in our Days, who bid Defiance to all Knowledge, proceed in very different Methods, as if they were willing to try the Strength of the Sick, and the Underſtandings of the Healthy at the ſame time. *Hippocrates* [a] adviſes us to waſh the Bowels with boiled Milk. *Celſus* ſays, we ſhould give *Clyſters* of a good *Decoction* of *Barley*;

[a] Lib. de Affect. pag. 523. Fœſ.

or *Clyſters* of *Milk*; of melted *Butter*; or of *Deer's Marrow*: *Oil-Clyſters* likewiſe are commended; *Butter* with *Roſes*, and with it *Whites* of *Eggs*, or a *Decoction* of *Linſeed*. For this Purpoſe this *Clyſter* is preſcribed.

℞ *Radic. Alth.* ℥j. *Hord. mund. vel Oryzæ. Pug.* j. *Semin. Lini & Cydonior. ā* ℥j. *Pſyll.* ʒß *Flor. Chamæm. pug.* j. *F. Decoctio in Lacte vel Juſculo; & Colaturæ addatur vel Sevum, vel Albumina*, &c.

Amatus the *Portugueze* ſays, that the following *Clyſter* is often ſufficient to cure a *Dyſentery*.

℞ *Decocti Hord.* ℔j. *vitellor. Ovor. N°* ij. *Sacch. Thomaſ.* ℥jß. *M. F. Enema.*

But the *Whey-Clyſters* of *Vander-Heyden* have had the moſt notable good Effects of all the *Clyſters* that have been adminiſtred on this Occaſion. *Hippocrates*, as I lately obſerved, had commended *Clyſters* made of *Milk*; and [b] *Galen* informs us, that drinking *Milk* was very uſeful to the Sick of a *Bloody Flux*; and *Vander Heyden*, City-Phyſician of *Ghent*, practiſed a *Whey* made of *Milk*,

[b] De Ther. ad Piſonem.

both

both by the *Mouth*, and by *Clysters*, with notable Success; insomuch, that great Quantities of his *Whey* were employed against an epidemick *Dysentery*, in *Ghent*, *Brussels*, and *Antwerp*.

The Success of his *Whey* became the common Talk among Men; and he gave us an Account of it in 1643; which Account was reprinted, with Additions, 1645; and afterwards *Vander-Heyden*'s Book was abridged, translated into *Latin*, and printed in *London*, 1653.

Dr. *Sydenham* [c] recommends likewise the drinking of *Whey*, and the giving it in *Clysters*, as an excellent Remedy for the *Bloody Flux*. The *Whey* was simple, not so much as mixed with Sugar; and Dr. *Sydenham* observed, that the *Blood* wholly disappeared after four *Clysters*; and the Patient commonly sweated plentifully, being put to Bed when he had taken his Number of *Clysters*; the *Whey*, in the Doctor's Opinion, getting into the Mass of Blood. During the sweating, the sick Person is only to drink warm Milk; and the same Method is to be repeated, in case of the *Bloody Flux* returning.

Dr. *Sydenham*, on this Occasion, informs us, that Dr. *Butler*, who attended the Lord *Howard* to *Tetuan*, cured many of the *En-*

[c] Prax. pag. 191. Edit. *Lond.* 1685.

voy's Retinue, and many of the *Moors* this Way, without either of these Physicians being acquainted with the Practice of the other. And now we may charitably believe, that their Agreement in Practice was owing to *Vander Heyden*'s Book, which had been lately published in *London*, and was the Subject of Conversation at that time.

Dr. *Baglivi* practised this *Whey*-Method with Success; which he, likely, learned from Dr. *Sydenham*; though we may wonder why he pretends, that this was kept a Secret among Authors, which neither *Vander Heyden*, nor Dr. *Sydenham* ever did. Dr. *Sydenham*, indeed, made his *liquid Laudanum* an Arcanum for some Years, but he never did conceal the *Whey-Practice*, so far as ever I could learn.

Herman Vander-Heyden has so good an Opinion of his Method by *Whey*, from his Experience of it, particularly in the Year 1624, that he thinks it infallible in the first four or five Days of the Disease, but honestly confesses, that it is not afterwards so much to be depended on. His Way of preparing his *Whey* is a little particular, as we may find in his [a] Book.

The next Methods for curing a *Dysentery* are by *astringent* Medicines, and by *bleed-*

[a] Cap. iii. pag. 7.

ing:

ing : The firſt of theſe are thought to be chiefly uſeful in the *Cure* of a *Dyſentery*; and the laſt not to yield to any other Method, if a *Plethora*, or an exceſſive great Quantity of *Blood* at any time can occaſion it; and therefore we muſt conſider, if theſe Methods are ſo generally proper and uſeful, that we may depend upon their Help in any Time of a *Dyſentery*.

Firſt, then, it is manifeſt from what is already ſhewn [a], that *aſtringent* Medicines cannot change the ſtimulating Cauſes, and conſequently, that they cannot take off the Griping, the common Symptom of a *Diarrhœa*, and of a *Dyſentery*; and as theſe Cauſes are the moſt common Cauſes of a *Dyſentery*, ſo *aſtringent* Medicines are not the direct and principal Cures of that Diſeaſe; eſpecially, ſo far as the *Dyſentery* is produced by ſtimulating Cauſes, which are always attended with *Griping*.

The only Uſe, then, of *aſtringent* Medicines, in the *Cure* of a *Dyſentery*, is in puting a Stop to the Loſs, and Effuſion of Blood, after the *Griping* is overcome, if the Blood ſhould continue ſo long. This is likewiſe [b] manifeſt from the mentioned Place in this Book; for it is there ſhewn that the Operation of *aſtringent* Medicines is the thicken-

[a] Sect. iii. hujus pag. 121. [b] pag. 122.

ing the common Mass of Liquors in general, or they thicken the flowing Liquor particularly, at the Place of its Efflux; and thus they put a Stop to the farther Discharge of that Liquor. Thus we become apprized of the most proper and effectual Use of *astringent* Medicines, and when they become improper; *h. e.* we know the best Use and Effects of astringent Medicines, and how to avoid the putting them to a wrong and an improper Use. This Account explains fully whatever has been observed in the Practice of a *Dysentery*, through every Age of Physick; and therefore I proceed to relate some of the most recommended Astringents, and these both simple and compounded.

The Roots of Tormentil, Comfrey, Plantain, Water-Lillies, Sorrel, Mallow, Dropwort and Pœony; which last is highly commended by *Galen* [a].

Dioscordes [b] extols the Leaves of *Plantain, Knot-Grass, Cadweed*, the Leaves of *Willow-Herb*, especially its Juice, given by way of a Clyster. Leaves of *Oak* are esteemed, as also *Sanicle, Golden-rod*, common *Winter-green*, common creeping *Mouse-ear, Agrimony, Tway-blade*, Mountain *Crowfoot, Cranes-bill, Periwincle*, &c.

[a] De simpl. Medic. Facult. lib. vi. [b] Lib. ii. cap. xxxvii.

Forestus

Foreſtus tells us, that he cured one ill of a *Dyſentery* with *Quinces*, and *Medlars*, after the giving many other excellent Medicines; and to which the Diſeaſe would not ſubmit. *Cornels*, *Sloes*, and the Fruit of the *Wayfaring-tree*, *&c.* have done great Service to the *Sick* of a *Dyſentery*.

Frankincenſe, *Maſtick*, *Nutmegs*, *Acorns*, *Beans*, *Earth* from *Lemnos*, *Bole Armoniack*, *Bloodſtone*, *Saphir*, *Saffron*, *Hartſhorn*, *Steel*, *Spa-waters*, *&c.* are in the greateſt Eſteem among *Phyſicians*.

Nothing is more recommended than the *Seed* of *Creſſes*, *Naſturtium Myriophillum*, of that Pattern of Botaniſts, Dr. *Moriſon*. *Simon Pauli* likewiſe informs us of very great Cures done by *Thlapſi-ſeed*, or the *Seed* of the *narrow-leaved Wild-creſs*, given by the Surgeons in a *German* Army. I have tried theſe Seeds, but without the Succeſs *Simon Pauli* had found. I have given half a *Dram* of it for one Doſe, and I find the Sick ſpit plentifully for two or three Hours after taking it; but no Degree of Abatement in the Violence of the *Dyſentery*.

It is chiefly to theſe ſimple Medicines the larger Compoſitions are owing, and which are found in great Numbers among Authors, and out of which any Phyſician may frame as numerous Compoſitions, as are at this time to be found in *Strother's*, or any other

modern *Receipt-Books.* But as this ſhould be waſting time to rear Quacks, I chuſe rather to relate ſome of the moſt approved Forms, from the beſt, and ſome of the moſt experienced Phyſicians.

Hippocrates [a] recommends the following Form.

℞ *Fabarum purarum Quadràntem & Rubiæ Surculos tritos. Admiſceto, & ex pingui aliquo delingendum porrigito.*

[b] *Galen* informs us, that he has made Uſe ſucceſsfully of theſe *Lozenges.*

℞ *Gallæ, Fructûs Ericæ, Opii, ſingulorum* ʒß. *Cum Aqua redigito in Paſtillos duorum Obolorum. Dato ex Aquâ aut Vino.*

This I have known made Uſe of with Succeſs which is a Compoſition in *Galen.*

℞ *Vini Falerni ſextar.* vj. *Mell.* ℔vj. *Coquito ſimul ad multam Spiſſitudinem Utere pleno Cochleario: delingendum dato.*

[a] Lib. de Acutis. [b] Lib. ix. de Comp. Medicam. ſecundum locos.

While

While I ſpeak of the Compoſitions of ancient Phyſicians, we may obſerve, that they made Uſe of *Quicklime*, *Sandarach*, *Auripigmentum*, and the like corroſive and *eſcharotick* Medicines in *Clyſters*; which are not in Uſe at preſent, and cannot be of any Uſe in curing a *Dyſentery*, however uſeful they may prove in ſome other Diſeaſes of the *Guts*, that have ſometimes attended a *Dyſentery*; but are not, at preſent, under our Conſideration.

But to proceed; *Aetius* has this notable Obſervation, which might give an Occaſion to *Helvetius* to make the Medicine he commends in his Book, *Sur la perte de ſang*. *Alumen liquidum*, ſays *Aetius*, *tritum cum Ovo abſorbendum præbe, & rurſus aquâ calidâ dilutum bibendum præbe; & admiraberis.* *Joh. Agricola* likewiſe mentions *Allum*, and its *Sugar*, for the *Cure* of a *Dyſentery*. The learned *Ludov. Mercatus* commends this *Form*.

℞ *Acaciæ. Hypociſtid. Carn. Cydonior. Sumach, Gallar.* ā ʒj. *Coral. rub. uſti & Aquâ Roſar. loti* ʒjß. *Opii* ʒj. *Cinnamomi, Cyperi.* ā ℈iv. *Syr. de Roſ. ſiccis q. ſ. M. F. Maſſa, quæ in Pil. formetur. Exhibeatur* ℈j.

The great *Euſtach. Rudius* eſteems this *Electuary*. ‡ ℞ *Croci,*

℞ *Croci, Coſti, Caſtorei, Aſari, Semin. Hyoſciami, Opii, Styracis ā* ʒj. *excipe Melle, & utere; Fabæ Ægyptiacæ Magnitudinem præbendo.*

Galen tells us[a], that an *Egg* boiled hard in *Vinegar* cures a *Dyſentery*. *Oribaſius* recommends the ſame Cure after him, and *Van-Helmont* is much in the Praiſes of this Practice. It ſeems to have done Good, becauſe it is ſtill much depended on among People of different Countries.

This[b] *Powder* has been uſed by *Hercules Saxonia*.

℞ *Oſſis Sepiæ uſti & pulveriſati* ʒij. *Spong. pice imbut. & in Ollula ad Ciner. combuſt. Cort. Mororum induratarum, ablatâ Pellicula interiore, pulver. ā* ʒj. *Margarit. pptar. Boli Armeni ā* ʒj. *F. pulvis, cujus* ʒj. *in Liquore convenienti capiatur.*

Acorns are highly commended by *Chriſtophorus Engelius*, who aſſures us, that there is not a more immediate and certain *Cure* for a *Dyſentery*, and every other *Flux* of *Blood*, than *Acorns*.

[a] De ſimpl. Medic. facult. Sp. 93. [b] Prax. p. 2. cap. 19.

Valloſius

Valleſius [a] informs us, that white Wax put into the Middle of a *Pear*, and roaſted with it, is an excellent Remedy for a *Dyſentery*; as alſo *Gum-Arabick* and Pitch, eſpecially if a *Diarrhœa* preceded the *Dyſentery*. To this Purpoſe Mr. *Boyle* very particularly recommends the making *Turpentine* into Pills with *Sugar*; in which he mixes a ſmall Quantity of *Mercurius dulcis*. He ſays, that it is an excellent Medicine for a *Dyſentery*; which Dr. *Pitcairn* valued ſo much, that he communicated it as a Secret among his Friends.

Borellus ſaw one cured in a very little Time, as by a Miracle, with a Draught of *Water*, wherein *Cork* had been boiled. *Riverius* tells us of a like Cure by Cork in a Powder.

Th. Bartholinus [b] informs us, that he cured many of his Countrymen with half a Pint of *Ale*, wherein the Tops of *Wormwood* and white *Salt* were boiled; but in the laſt Spoonful was the Powder of one *Nutmeg*. This Experiment makes the Cure of *Themiſon* in *Celſus* to be more readily believed.

Sylvius de la Boe [c] recommends this Decoction, when an Ulcer is ſuppoſed to be in the *ſmall Guts*.

[a] Lib. iii. Obſ. iv. [b] Cent. 2. Hiſt. 65. [c] Lib. i. prax. cap. 13. N. 52.

℞ *Radic.*

℞ *Radic. Consolidæ saracen. Folior. Pyrolæ, Alchimillæ. Hæderæ terrestr. Saniculæ maris, Summitatum Hyperici Rasuræ C. C. Coq. in Aq. Ferrar. Colaturæ add. Syr. Althææ Fernel. & Aquam Cinnamomi, addito Balsamo Sulphuris anisato, vel cum Succini Oleo parato ad guttas aliquot.*

The Honourable Mr. *Boyle* relates, in his Book of the Usefulness of experimental Philosophy, that one was cured by the *Smoak* of *Ginger* taken up by the *Anus*.

However useful these two Remedies may be in *Ulcers* of the *Guts*, yet they will prove of very little use in the Cure of a *Dysentery*, which is very rarely attended with an *Ulcer*. And therefore I will only add a Form or two more of these Medicines that may be truly useful in the *Cure* of a *Dysentery*.

Lazarus Riverius commends the following *Electuary*.

℞ *Conserv. Radic Cichor.* ʒj. *veterum Rosarum rubrarum* ʒß. *Pulpæ Passular. Corinthiacarum* ʒvj. *Croci Martis* ʒj *Coral. rub. ppti, Rasuræ Eboris & C. C. ā* ℈j. *cum Syrupo de Rosis siccis F. Opiata; addendo Spiritûs Vitrioli gr.* x.

De

De quâ capiat Caſtaneæ Magnitudinem tribus, ante paſtum, horis.

The ſame excellent Practitioner values this *Opiate*, or Electuary.

℞ *Paſſular. Corinthiac.* ℔ß. *Coq. ad Pultis conſiſtentiam in Vino veteri. Tranſfundantur Setaceo, & adde Corticis Citri conditi piſtati* ʒß. *pulver. Electri, Triaſantal. & Diamargarit. frigid. ā* ʒj. *Coral. rub. ppti & Roſ. rubrar. ā* ℈vj *Jecor. Lupi ppti* ʒiij. *F. Opiata.*

Beſides the Medicines inwardly given, and thoſe thrown into the Body by Clyſters, Authors have Forms of Medicines they apply to the Belly; which are often uſeful. Such is the Application of [a] *Balthaſ. Brunnerus.*

℞ *Radic. Tormentillæ, Micæ Panis ā q. ſ. Coq. in Vino, vel Aceto, uſquedum F. Pulticula. Hâc inunge Goſſypium linteum Ventri applicandum.*

The Medicines hitherto related being formerly recommended in the *Cure* of a *Diarrhœa*; we may again obſerve, that the

[a] Conſil. Med. 50.

Doctrine,

Doctrine of that Diſeaſe comprehends, in general, every thing that can be ſaid of the *Dyſentery*. The remaining Method by *bleeding*, ſeems alone to be a particular Help for the Dyſentery; which is therefore proper to be conſidered.

If we conſider then, that *Griping* is the moſt conſtant Symptom of a *Dyſentery*; and that the *Griping* is produced by *ſtimulating* Cauſes; it is very manifeſt, that *bleeding* cannot cure a *Dyſentery* produced, and made by a *Stimulus*. Moreover, as the *Stimulus* is the moſt general *Cauſe* of a *Dyſentery*, ſo *bleeding* cannot be generally the *Cure* of it.

Among all the great Effects of *bleeding*, there is not any of them, beſides the Power it ſometimes has in making a *Revulſion*, and in changing the *Coherence* of Blood, whereby bleeding can any ways be uſeful in a *Dyſentery*. If a *Plethora*, or a Superfluity of Blood, was often the Cauſe of a *Dyſentery*, *bleeding* ſhould not only leſſen the ſuperfluous Quantity, in Proportion to what is let out of the Veins, but by the *Secretions* conſequent thereupon. But as neither of theſe commonly concur in a *Dyſentery*, *bleeding* is very rarely the Cure of a *Dyſentery*; as we find its Succeſs very rarely mentioned, and obſerved.

The Caſe of *Hippocrates*, concerning the *Wife* of *Epicharmus*, may be no more than what

what happens commonly to *Women* before their Labour, and even before they have their monthly *Courſes*; for they are then *griped* and have looſe Stools; both which go off with their Labour, and the firſt Show of the other. This Obſervation, therefore, cannot prove any Foundation for the Practice of bleeding in Caſes of a *Dyſentery*.

The Caſes of *Aetius* and *Trallianus* happen when *Fluidity* is acquired to the *Blood* by *bleeding*; but they who know the Circumſtances and State of the *Blood*, when the *Blood* is rendered more fluid by *bleeding*, know likewiſe, that they ſeldom meet in a *Dyſentery*; and, conſequently, that *bleeding* is ſeldom its Cure. Moreover, it may happen, that one Cauſe may produce the Diſcharge of *Blood* into the *Guts*, when ſome other general Cauſe of a *Looſneſs* occaſions the looſe Stools; ſo that the *Blood* may ceaſe to be in the *Stools*, while the Looſneſs continues; or, that the *Dyſentery* may be turned into a *Diarrhœa* by the *bleeding*, which could not be if they had been both owing to any one Cauſe. Beſides, if we ſuppoſe the *bleeding* to have been above the *Heart*, and thereby the Diſcharge by the *bleeding* to be quicker than the Diſcharge of Blood at the ſmall Emiſſaries of the *Guts*; or, that there has been a *Revulſion* by *bleeding*; in that *Caſe* the *Diſcharge* of *Blood* into

into the *Guts* may ceaſe in time of the *bleeding*, and very ſuddenly.

This is truly the ſurprizing Caſe of *Amatus* the *Portugueze*, who tells us, that a candid and honeſt Phyſician was deſired to viſit a Perſon, who had been long ill of a *Dyſentery*; for it had continued thirty Days with a *Fever*, and great Violence. This Phyſician had his Patient bled at the *Baſilick Vein* in the right *Arm*. Liſten, ſays *Amatus*, to the ſurprizing Event; immediately, and it is wonderful! the *Blood* ceaſed, but the *Looſneſs* continued.

Having thus accounted for theſe particular Caſes, we may conclude, from what has been ſaid, that *bleeding* cannot be a general Cure of a *Dyſentery*; which is likewiſe the Obſervation of all Phyſicians. However, we are now taught when we may ſafely attempt to *cure* a *Dyſentery* by *bleeding*; and *Rondeletius* ſays, they that order *bleeding* in a *Dyſentery*, do it often without Judgment, or any Benefit to the Sick; becauſe the Sick are ſufficiently weakened by the great Loſs of *Blood* and *Spirits*. *Vander-Heyden* is of the ſame Opinion with *Rondeletius*; but endeavours to ſhew the Caſes and Circumſtances of a *Dyſentery*, when *bleeding* may be attempted; but with little Succeſs. Theſe Times are now diſcovered, and I there-

fore

fore proceed to give the *prognoſtick* Signs of the Curableneſs of a *Dyſentery*.

CHAP. XV.

The Prognoſticks of a DYSENTERY, *from the Nature and Practice of the Diſeaſe.*

PRognoſticks taken from the *Nature* and *Cauſes* of a *Dyſentery* regard either the *Griping*, the *Stimulus*, or the Diſcharge of Blood. The Prognoſticks drawn from the two firſt, the *Griping*, *viz.* from ſtimulating Cauſes, are already eſtabliſhed in the fifth Chapter of this Book, and with very little Variation, may be aptly applied to the *Dyſentery*. Thus we may eaſily underſtand the *Prognoſticks* made of a *Dyſentery*, by the great *Hippocrates*, [a] *Every Dyſentery is dangerous that begins with a Fever, and in which we perceive a great Variety of Excrements.*

[a] Lib. ii. prædictor. Sect. ii.

As this *Prognostick* of *Corn. Celsus*, taken from that of *Hippocrates*, and continued from his Book περὶ παθῶν [b]. *Dejectionibus quoque si Febris accessit, si inflammatio Jecinoris, aut Præcordiorum, aut Ventris, si immodica Sitis, si longius Tempus, si Alvus varia, si cum Dolore est, etiam Mortis periculum subest; maximeque si, inter hæc, Tormina vetera esse cœperunt.*

The *Prognosticks* drawn from the Considerations of the *Blood* of a *Dysentery*, are not found among Authors; however terrible that Symptom has been, both to the Patients, and their Physicians: So that the *Blood* and the devouring Ulcers, so frightful in Physick Books, are cured insensibly by the Methods of a *Diarrhœa*, that was reputed a more safe Distemper, and most easily cured.

It were easy to draw such Prognosticks as respect the *Blood* of a *Dysentery*: But as I have not made any great Account of that terrible Symptom, in my Book; so in Practice I will make it appear, that a *Dysentery* is a Disease that submits to the Cure of the Species of a *Diarrhœa* most easily to be cured.

Observation I.

The first History I chuse to give, is of one cured of a *Dysentery* by *Whey-Clysters*, in

[b] Lib. ii. cap. viii.

1693. It was then that Mr. *James Burnet* had *looſe* and bloody *Stools*; he was *griped*, and become very lean by its continuing; he had a Fever, and no Deſire to eat.

This Gentleman had been under the Direction of ſeveral Phyſicians, and all of them preſſing his Cure with aſtringent Medicines, he took a great Variety of Medicines of that Kind.

I propoſed the curing him with *Whey-Clyſters*; but that Method was repreſented as a raſh Attempt in a young Phyſician, and that nothing was ſo dangerous as any Kind of Clyſter in Caſes of a *Bloody Flux*. It was in vain to urge the common Uſe of Clyſters on ſuch Occaſions, and the Authority of Dr. *Sydenham* for a *Whey-Clyſter*, the People had conceived ſo great an Opinion of the Honeſty, as well as of the Skill of their Phyſician, that they could not imagine he would betray them in ſo material an Article as Life is; and therefore as I could not be ſuffered to do him Good, I wiſhed them better Succeſs, and bid them farewel.

After ſome Days, the Perſon growing ſtill worſe, I was again deſired to viſit him, when I ordered the *Whey-Clyſters*, acquainting the Family before-hand, that this was neither a new, nor a dangerous Method; but a Method that had been found very beneficial on the like Occaſion. Four Clyſters were got

ready, and were given ſucceſſively, one always as the former was thrown out of the *Guts*. He was put to Bed after voiding the fourth *Clyſter*, and drank nothing but new Milk, till I viſited him next Day. He ſweat plentifully, but had no bloody Stool after the firſt Clyſter. His *Griping* went off, and his *Looſneſs* entirely ceaſed in twenty four Hours. Thus impending Death was prevented by this eaſy Method, and the ſick Perſon, in ſome Weeks, recovered his Strength. I, laſtly, wiſh Phyſicians would ſhew ſome grateful Faithfulneſs to their Patients in Return of all the good Opinion and Eſteem they commonly declare for them.

Observation II.

Captain *Braxton* was taken ill of a *Dyſentery* about the Time Colonel *Gibſon*'s Regiment left *Newfoundland*. He was ill during the Voyage, and left the *Fleet* off *Plymouth*, where the Captain was put aſhore. He took many Medicines from the Phyſicians of the mentioned Place, but without any Succeſs. And therefore leaving *Plymouth*, he came to *London*, and took Advice of the late learned Dr. *Liſter*, and of ſome other Phyſicians. He took *Ipecacuanha*, and ſome of the Medicines related in this Book.

After

After two Months, I was desired to visit him. I found that he never had fewer Stools, in twenty four Hours, than twenty. His Belly was much swelled through the pertinacious Practice of *Binding* Medicines, and perhaps by the long continuing of the *Dysentery*. He had a great Drought, he was feverish, and had no Desire to Food. His *Griping*, and frequent going to Stool broke his Rest.

As it was early in the Morning that I made him my first Visit, I ordered him to take the following Powder immediately.

℞ *Pulv. Radic. Rhabarb. electi* ℈j. *Cortic. Cinnamomi Gr.* x. *M. F. Pulvis quantocyùs exhibendus.*

I saw him in the Evening, and I found his Physick did not give him more Stools than he commonly had before he took it. His *Griping* was considerably abated. I ordered him a Dose of my *Electuary* for curing *Fluxes*, which he took at Bed-time: But he was under great Despair, when I visited him next Morning; for he had many Stools in the Night, and would not take any Thing till the Evening, Tho' the Numbers of his Stools were greater, yet he had no Blood with them; his Belly fell of the Swelling; he was not griped, and his Stools

were more cohering, and of a better Conſiſtence. That Evening he took another Doſe of my *Electuary*, and a ſecond the following Morning. He ſlept well that Night, and had one Stool only, and that of a natural Conſiſtence; he had another ſuch Stool next Day, and was cured.

He took a Doſe of the *Electuary* at Bed-time, for two Nights more. He drank an Hour after the *Bolus*; and for all his Drink, the White-Drink thus prepared.

℞ *Decocti albi* ℔iß. *Aq. Cinnamomi hordeatæ* ʒiij. *Sacchari albiſſimi* ʒiij. *M. & bibat tepidè* ʒvj. *horæ intervallo ab aſſumpto Bolo.*

He took a ſmall Medicine of another Kind, for a Week, to prevent his relapſing, which likewiſe proved effectual.

Sir *John Gibſon*'s Regiment was plentifully provided with my Medicine, when they went upon the mentioned Expedition to *Newfoundland*; but *Dyſenteries* were then ſo common in the Regiment, that their Surgeon, Mr. *Heart*, (who deſervedly muſt be reckoned in the firſt Rank of that Order of Men) had adminiſtred their Stock with all deſirable Succeſs, excepting about a Quarter of a Pound that was reſerved for the Officers, but what Captain

Braxton

Braxton had not of, having been in a diſtant Ship, and Mr. *Heart* was not made acquainted with his Condition.

OBSERVATION III.

When I was at *Epſom* in 1698, I was deſired to viſit Mrs. *Cryer*, who came from *Barbadoes*, to be cured of a *Dyſentery*. She firſt went to *Antegoa*, hoping to find ſome of my *Electuary*, with which the Generals *Codringtons*, Father and Son, were commonly provided. But their Stock being expended, ſhe proceeded to *England* for her Cure. She fell into the Hands of Sir *Richard Blackmore*, and ſome other Phyſicians in the City, who preſcribed many Medicines for her; but all their Means proving ineffectual, ſhe was ſent to *Epſom* to drink the *Waters*, which were like rather to carry her off, than her Diſeaſe. She was in that low Condition, and her *Dyſentery* was ſo ſtrong, as gave me ſmall Hopes of curing her. Having, then, declared my Fears to her Friends, and promiſing to do what I thought moſt likely to ſerve her, under her deſperate Circumſtances, I preſcribed her this Clyſter.

℞ *Decocti Commun. & Carminativi* ℥vij.
Injiciatur mane Clyſter.

When the *Clyſter* came off, ſhe took a Doſe of my Medicine for curing the *Fluxes*, at Bed-time, and a ſecond next Morning, without drinking after it for an Hour: But as ſhe was continually fainting, I ordered her this Cordial, to be taken as often as ſhe found her ſelf faint.

℞ *Aq. Ulmar. Puleg. Ceraſor. nigror. ā* ℥ij. *Bryon. Compoſ.* ℥jß. *Tinct. Croci Caſtor. Spir. Sal. Armon. ā Gutt.* xxx. *Syr. de Roſis Siccis* ℥j. *M. F. Julapium. Hujus accipiat cochlear.* iv. *vel.* v. *in Fatiſcentiis.*

I found, next Morning, that her *Stools* were fewer, and without any *Blood.* She continued all that Day to her *Cordial* and *White-Drink*, and that Night ſhe took another *Doſe* of my *Electuary.* In three Days ſhe was rid of her *Dyſentery*; but ſhe was ſo weak, and had that Averſion to all Manner of Food, that I ſtill deſpaired of her living. However I recommended to her the drinking of the *White-Drink*, and to take Nouriſhment frequently; and to my great Admiration, I ſaw her in *London*, well recovered in two Months.

OBSER-

‡

OBSERVATION IV.

Mr. *Malthus*, now one of the ſix Clarks (Son of that worthy *Apothecary*, whom Dr. *Sydenham* made more generally known) had been many Months ill of a *Dyſentery*, and was reduced to that Extremity, that no Check could be given it, but by a Grain of *Opium* every ſix Hours. He was about nine Years old. I was deſired to viſit him *October* 27th, 1701. I gave him my Medicine after a *Clyſter* for waſhing and comforting his Bowels. The *Youth* being very weak, and tired with Medicines, took my Medicine diſſolved in *White-Drink*; but two Doſes had no Effect upon him by next Day. I therefore perſuaded the indulgent Father to preſs his only Son, to take the Medicine as it was, in *Electuary*; which being done with Tears in both their Eyes, the Medicine took Place, and he recovered ſo well by the firſt of *November*, that he was out of Bed by ten that Morning, when I found him in perfect Health; and with him Sir *Edw. Hans*, who had been his Phyſician.

OBSERVATION V.

That I may ſhew the great Extremity the Sick

Sick may be reduced to, and yet receive a Cure, I will finiſh with this Obſervation, which we may find as full of extraordinary Incidents, as can well be found. The Lady *Belling* was ſo ill of a *Dyſentery*, that ſhe was left by her Phyſicains; ſhe having no Pulſe, and (as the Phyſicians conjectured) that her *Guts* were gangrened. I was ſent for, when ſhe was in this Condition. I could not indeed feel any Pulſe; but her *Dyſentery* ſtill made Head, which was not poſſible if her *Guts* had begun to *gangrene*. In this deſperate Condition, I told her Son, Mr. *Arundel*, that I could hardly think my *Lady* could live till Morning, ſhe was ſo very far exhauſted. However, ſhe being one of the moſt bountiful Diſpenſers to poor Families, I would attempt her Cure, tho' I ſcarcely thought it poſſible.

At ſix, then, in the Evening, *November* 30th, ſhe had this Clyſter.

℞ *Baccar. Juniperi contuſar.* ℥jß. *Flor Chamæmeli M.* j. *Bulliant in aq. Commun.* ℥x. *ad* vj. *circiter. Colaturæ addè dimidium Ovi Vitelli, Ol. chymici Juniperi* ʒj. *F. Enema.*

She kept the *Clyſter* about a Quarter of an Hour, and then took a Doſe of my *Electuary*, and an Hour after that, a Draught of

of *White-Drink*, as I commonly preſcribe it.

As this *Lady* was in this Extremity, I was willing to know the Succeſs of this firſt Adminiſtration, before I proceeded; and therefore I deſired to know how my Patient was about ten or eleven of the Clock. It was then I was told by her *Houſe-keeper* that her Stools had abated, and that there came no more Blood in them. Thus, being encouraged, I ſent a *Bolus* to be taken immediately, and another for next Morning.

In the Morning, I found that ſhe had not above a Stool in the Night; that her Pulſe was up, and ſtrong to her Condition; that ſhe had eat two poach'd Eggs in the Night; but that ſhe had not taken her Morning Bolus, and was reſolved not to take any more Medicines.

This ſurprized me, and all her Family. I told her, that ſhe would certainly recover; whereas I did ſcarcely believe it poſſible for her to live till this Morning. Her Children begged her on their Knees to perfect her Recovery. I preſſed her again, and aſſured her of her doing well; and that ſhe would live for the Support of many poor Families ſhe maintained, if ſhe deſpiſed living: But all in vain, for ſhe declared ſhe would not take any more Medicines.

However,

However, that Afternoon ſhe ſent for Sir *Richard Blackmore*, and the late Dr. *Cade* again, who were her Phyſicians. She kept her Ground till *Wedneſday*, the ſecond of *December*, and died on the *Saturday* following.

Great Inquiry was made into this unaccountable Reſolution. Mrs. *Harriſon*, who ſat up with her that Night, declared, that the *Apothecary*, Mr. *Tobin*, was the only Perſon that ſaw her; that he betwixt eleven and twelve whiſpered with her Ladyſhip, and that ſhe, Mrs. *Harriſon*, withdrew from the Bed-Side, ſo that ſhe did not know what paſſed, but it was believed, that he diſſuaded her from proceeding with her Cure with me, believing that what was already done would eſtabliſh his Friends with her.

This *Lady* was a good Cuſtomer to him, for her Family, and the Poor ſhe ſupported; but nothing could make him juſt to her. For it appears by a Lady of Honour and Quality, that he did diſſuade her, and by a very ſtrange Argument, tho' one not unſuitable to her. He told her, that her Recovery was not *natural*; it was above the Power of any Medicine; and that ſhe was cured by a Charm. Now as ſhe was of a Religion that teaches the Unlawfulneſs of Cures by Amulets and Charms, and believing in the deep Knowledge, and *Catholick*

lick Honesty of her *Apothecary*, (for this Cure being of that Kind) died a *Martyr* to a *Knave*.

OBSERVATION VI.

In the foregoing Observations, I have endeavoured to shew the *Curableness* of a *Dysentery*, while *Life* continues. In this Observation, we have the Case of a *Dysentery* very surprizing and desperate.

A poor Man, near *Aldgate*, was recommended to me by the *Dispensary*-Physicians. He was so ill of a *Dysentery*, that he could not come to my House; but a Woman came for my Advice, and brought with her a large Gally-pot full of a slimy Substance, in Appearance; but what I found to be a very large Piece of the *Villous Coat* of the *Rectum*. It was a Case, at that Time, new to me, and so desperate, that I gave the Woman half a Pound of my *Electuary*, with Directions for the taking it. The Man recovered, and lived some Years afterwards.

Sylvius [a] mentions a like Case; but thinks it incurable: But it is not so, as I have since experienced on another Occasion.

Galen [b] had seen a Discharge of the like Substance, and proves from it, the *Dysente-*

[a] Lib. i. Prax. cap. xvi. & Tract. v. Append. [b] Lib. i. de loc. affect. & lib. iv. de Usu partium.

ry

ry having its Seat in the great *Guts*. He did not know the true State of the Structure of the *Guts*, that made his Argument of great Force. He ſaw the like Diſcharge in ſeveral other Diſeaſes, and he took it to be the *Guts* themſelves, that were putrified, *corrupted, and voided by Stool.* Yet the Sick ſuffered not by the Loſs.

This Evacuation of the *Villous Coat* has been [a] obſerved by *Herman Vander-Heyden. Veu que l'acre ou ſalée humeur va de plus en plus corrodant & ſouvent penetrant le Boyau juſques à la ſeparation des pellures, curieuſment remarqué; nommement en la dejection d'un Gentilhomme de Gand,* &c.

I own, I was ſurprized with the Sight of this Coat, nor did I believe it ſo eaſily cured, as I find it is; and I am perſuaded this Account will be very agreeable to every candid Phyſician to whom the like Caſe does occur.

The CONCLUSION.

Having in this Account of a Looſneſs, not only explained a Looſneſs in general, but from the *Diagnoſtick* Signs of every particular *Looſneſs*, I have diſcovered the *Nature* of every particular *Looſneſs*; and

[a] Chap. v. pag. 12. Appendix.

from

from their *Nature* I have fixed and aſcertained the *Cauſes* of every particular *Looſneſs*; having likewiſe ſhewn the *Curableneſs* and *Incurableneſs* of every particular *Looſneſs*, from the Diſcovery I have made of their *Nature* and *Cauſes*; as alſo the moſt direct, and proper Methods of curing them; it muſt be granted, that the *curative* Branch of *Phyſick* is no longer to be reputed *uncertain*, *falſe*, and the mere *Impoſition* of ſome Men, that make it their chief Study to deceive others, who, *viz.* only make Uſe of bare *Conjectures* and weak *Arguments* in diſcovering the Nature of Diſeaſes; and that *Phyſicians* do no longer make Uſe of fortuitous and accidental *Remedies*, or of *Medicines* unknown to them; and laſtly, that *Phyſicians* are no longer miſtaken either in *curing* Diſeaſes, or in *judging* of the Probability of curing them; as the Patrons of the *preſervative* Branch of *Phyſick* by *Exerciſe*, and without Medicines, have charged the curative Branch. And what has now been performed in Regard to a *Looſneſs*, may be performed on every other Diſeaſe.

APPENDIX.

IN the Method of the foregoing Book, I premiſed an Account of our going naturally to Stool, in order to a better Underſtanding why we go to Stool preternaturally; and for finding the Remedies, that are proper to cure this extraordinary purging. We diſcovered at the ſame Time, that *Purging* by *Medicines*, or our going to Stool *artificially*, has often occaſioned the preternatural Evacuation, both by creating a diſtinct Species of the Diſeaſe, or continuing it by being unproperly doſed, when purging Medicines were adminiſtred, in the moſt proper Time of the Diſeaſe. It has therefore been thought neceſſary, to bring at this Time, for publick Uſe, what I performed

ſome Years ago, when I rendred the Doſes of *purging* and *vomiting* Medicines poſitive, and certain in all Caſes; which Method had only been conſidered by the more Curious, in the *Philoſophical Tranſactions* of the *Royal Society*.

But before we proceed, it may be proper to acquaint my Readers, with what induced me to frame and publiſh the following *Problem*. Ingenious Men very commonly complained, that Phyſicians did not improve the Practice of Phyſick by their late uſeful Diſcoveries, and acute Speculations; that the great Diſcoveries made by *Sanctorius* in his *ſtatical Phyſick*; that the great Diſcoveries of the Circulation of the Blood made by Dr. *Harvey*, and the Doctrine of Pulſes founded upon this, and the Structure of the Arteries, have never been applied, for improving the Practice of Phyſick; inſomuch, that theſe Improvements, were rather thought Embelliſhments and Ornaments of Phyſick, than that they could be of any particular Service to Phyſicians.

Every Phyſician, and every other Perſon, who has read the *ſtatical Phyſick* of *Sanctorius*, readily applaud his Experiments. Phyſicians, more particularly, ſubſcribe to the Truth of his firſt *Aphoriſm*, and acknowledge it for a proper and true Scheme for preſerving

ſerving Health, and for practiſing for the Cure of Diſeaſes. [a] *Hippocrates* had long ago told us in general, what *Sanctorius* has more particularly informed us of. Neither was [b] *Hippocrates* ignorant of the great Diverſity of the Quantity of perſpiring Matter, *Sanctorius* appriſes us of in his ſeventh *Aphoriſm*; all which Difficulties render his excellent Doctrine of no Uſe to the Sick, however practicable it had been found in the Balance and Scales.

And therefore I reſolved to ſhew, how theſe excellent Diſcoveries might be applied in every Part of Phyſick, for the Want whereof, the moſt eaſy and moſt obvious Parts of Phyſick had ſo very much ſuffered: For this Purpoſe I made Choice of *purging* and *vomiting* Medicines; Medicines, many thouſands of times adminiſtred every Day, from the Beginning of Phyſick; whoſe Operations are far more conſtant, and conſpicuous, than the Operations of any other Medicines; and yet we find, that this infinite Number of Experiences, and Obſervations, had not brought forth any ſuitable Fruits and Effects to Phyſicians; for from all thoſe Obſervations, Phyſicians did not know the common Doſes, that were proper for one Man with another, and far leſs could they compare the reſpective

[a] Lib. de Morbo Sacro. [b] Lib. 3. de Diætâ Sect. 3.

Strengths of different purging Medicines. As for the Doſes of purging Medicines, that are proper to Men, below the State of Manhood; they are as little to be found in Books of Phyſick, as are the Doſes of purging Medicines, that ought to be adapted to the declining Years of Men; or as theſe Doſes are to purge Men, in the great Variety that occurs in the Courſe of Diſeaſes.

Nothing then, in my Opinion, could be more uſeful, no Improvement could be more conſpicuous and diſtinguiſhing, than that which rendered the Practice of Medicines (of all the moſt commonly adminiſtred) ſafe and uſeful; upon them then I fixed, that the Difficulties hitherto unſurmountable, and that had reſiſted the conſtant Obſervation of all former Ages, ſhould become the ſubject Matter of my Inquiry; which I ſent Abroad in the following *Problem*, allowing to the learned Phyſicians in *Europe* a Year for ſolving it; as appears from the Problem it ſelf, as it was publiſhed in the [a] *Tranſactions*; and which was propoſed, *March* 17, 1704-5.

[a] Philoſ. Tranſact. N°. 293. pag. 1753.

Problema

Problema Medicinæ Cultoribus solvendum proponit GUILIELMUS COCKBURN, *M. D. R.S.S.*

EXperientiâ constat quam diversæ sint Medicamentorum Operationes pro Temperamentorum, Ætatum, ac ejusdem Ætatis diversi statûs varietate. Magis vero conspicua sunt Emeticorum & Purgantium Opera; adeo ut quæ provectiores Ætate quam lenissimè purgant, Infantes obruant: quæ justâ Cathartici Dose hodie propinamus, nimis vel minimè nos crastino afficiunt die. Immo ad hanc omnem diversitatem operantur temperie solummodo differentibus.

Quum igitur tam invicta sit ubiq; difficultas in debita Pharmacorum evacuantium Dose decernenda; optanda esset Methodus quâ possimus eadem absq; dubio administrare.

Methodum hanc apodeicticis expediit argumentis, simul & sigillis occlusam Præsidi nostro commisit.

Rogat tamen Medicos quoslibet, quænam sit illa vel similis Methodus quâ sine errore dirigamur; eorumque solutiones ad Cal. Mart. 1705-6. expectabit, quas postmodum cum suâ publicabit.

While this Problem was locked up with the *Royal Society*, the learned Dr. *Boerhaave*, and ſome other eminent Phyſicians abroad, ſignified to me, the Difficulties they found in ſolving the Problem; while the late learned Dr. *Pitcairn* every where declared, that the Problem was not to be ſolved.

The *Royal Academy of Sciences* in *Paris*, found the Difficulty equally great, with the forementioned Phyſicians; but they, declaring the great Uſefulneſs of the Diſcoveries ſet forth in the Problem, and that might be expected from its Solution, very honourably deſired our *Royal Society* would publiſh this Solution, before the Time allotted for that Purpoſe in the Program; more eſpecially, that there was not any Phyſician in *France*, that could make any ſtep towards a Solution.

The *Royal Society* here, opened the Solution in the Beginning of *January*, and publiſhed it in their *Tranſactions*, in the Beginning of the following Month; which was near a quarter of a Year before the Time.

Tho' the Malice and Envy of ſome on this Occaſion was ſo great, as to deter and make me reſolve againſt making any Offers of this Kind to the *Royal Society*; yet, about four Years afterwards, I framed Tables, ſhewing the Practicableneſs of this Solution. But, before

before I laid these Tables before the *Royal Society*, I advised with our worthy President, the learned Sir *Isaac Newton*, the great Honour of our Island, and whom none hath excelled in any Age, for making Discoveries in Philosophy. After he had considered the Tables, he was of Opinion, that they should be published in the *Philosophical Transactions*; both because of my Solution having been published in them; as also, because Physicians pretended, that my Solution was an ingenious Speculation upon an Hypothesis, but what never could be brought to Practice. But as he himself had always esteemed my Solution, to be a perfect Solution of my Problem, and that he was now sure, that in these Tables, was fully contained, the Practice of *purging* and *vomiting* Medicines; he was not only confirmed in his first Opinion, but thought me necessarily obliged to publish them in the *Transactions*.

Being therefore convinced, by this Declaration of a candid Friend, and of an undoubted Judge in these Matters, I submitted to his Judgment; both which Papers do now follow.

DOCTOR COCKBURN's *Solution of his Problem for determining the proper Doſes of Purging and Vomiting Medicines, in every Age of a Man, in every Conſtitution, in every Change of Conſtitution all over the World; which was propoſed by him, in the* Philoſophical Tranſactions, *laſt* March.

IN Order to determine rightly the different Doſes of vomiting and purging Medicines, that are requiſite according to the different Ages, and Conſtitutions of Men; we muſt, firſt, ſuppoſe that theſe Medicines do not perform their Operation, before they get into the Maſs of Blood, and mix themſelves with it; for we find, that if they are not nauſeous, they produce no ſenſible Effect until ſuch a Time as is neceſſary for that Purpoſe. *Secondly*, That their

their general Effect is the Alteration of the Temperament of the Blood, and all other circulating Liquors.

From these two Postulata we infer, that where there is the same Crasis of the Blood, the Doses of Medicines necessary to produce a determined Effect, must always be as the Quantity of Blood; for if it require a determined Dose to alter the Crasis, for Example, of a Pound of Blood to a certain Degree, it will require a double Dose to alter two Pound to the same Degree; a triple Dose will be requisite to produce the same Effect in three Pound of Blood, *&c.* and universally, if the Quantity of Blood *b* require the Dose *d*, the Quantity of Blood *mb* will require the Dose *md*; for *b* : *d* :: *mb* : *md*.

Coroll. Since the Blood, and all other circulating Liquors of the Body may be generally estimated by the Weight of the Animal (for what we call solid Parts, are only Canals for containing those Liquors) it follows, that *cæteris paribus*, the Quantity of the Doses ought always to be proportionable to the Weight of the Body; therefore, the Dose of these Medicines to be given a Child new born is to the Dose of the same Medicines that are fit for Men of full Growth, as is the Weight of a Child to the Weight of a Man. For Instance, thirty Grains of

Pil.

Pil. Rudii is the common Doſe for a Man, and the Weight of a Man, one with another, may be reputed twelve Stone, or a hundred and ſixty Pound Weight; and the Weight of a new born Infant may be reputed twelve Pound: Now as a hundred and ſixty, the Weight of a Man, is to twelve, the Weight of a Child; ſo is thirty Grains, the ordinary Doſe for a Man, to two Grains and a Quarter, which is the ordinary Doſe for a Child; and always the ſame Proportion, as the Child grows, the Doſes of Phyſick to be given it ought to encreaſe, till about the Age of twenty, or twenty one, when moſt People come to their full Growth; after which Age, the Doſes to be given continue the ſame till Men be paſt fifty, from which Time we may reckon that the Quantity and Force of the Blood does continually decreaſe, and the Doſes of the Medicines ought to decreaſe in the ſame Proportion.

In this Method of reaſoning we have ſuppoſed all Men of the ſame Conſtitution, and that their Increaſe, in Proportion to their Years, and their Manner of Secretions, were alike; it being neceſſary to conſider the Thing, at firſt, in the moſt ſimple Manner: But becauſe the Temperament and Conſtitutions of Men are very different, according to the various Craſis of their Blood,

and

and other circulating Liquors, the Quantity of the Doſes will not always be exactly in the ſame Proportion with the Weight of the Body. This different Temperament of the Blood conſiſts in a certain Diſpoſition its Parts have to cohere leſs or more one with another, by which the Blood becomes more or leſs fluid, and according to the various Degrees of Coheſion, the Operation of Medicines, on the Blood, will be various. For, let us ſuppoſe two Perſons with equal Quantities of Blood, but differing in Degrees of Coheſion; it is plain, that a Medicine will be eaſier mixt with the Blood, whoſe Parts are leſs coherent, than with that whoſe Parts are more firmly united together; and the Proportion of this Facility of mixing the Parts of the Medicine with the Parts of the Blood, will be always directly as the Fluidity, or reciprocally as the Tenacity of the Parts of the Blood, and the Force of the Medicine upon the Blood will be likewiſe in the ſame Proportion; and therefore, to have a Medicine act with equal Force, upon theſe two different Perſons, the Doſes to be given them muſt be always proportional to the Tenacity, or Thickneſs of their Blood; ſuppoſing the Blood in both to circulate with the ſame Velocity: But if the Velocity of the Blood be different, the Operation of

the Medicines, *h. e.* the Quantity of the Secretions made by them, will be as the Velocities of the Blood; for, the Secretions made at any Gland, in a given Time, is always as the Quantity of Blood, which comes to it in that Time, *h. e.* as its Velocity. Now, *cæteris paribus*, the Velocity of the Blood is always as its Fluidity, or reciprocally as its Degree of Coheſion; and therefore, the Quantity of the Doſe to be given, to produce the ſame Effect, muſt be directly as the Degree of Coheſion in the Parts of the Blood.

PROP. I.

In two Perſons that have equal Quantities of Blood, which differ in Degree of Coheſion, The Quantity of the Doſes of vomiting and purging Medicines, neceſſary to be given, in order to produce the ſame Effect, muſt be as the Square of the Degrees of Coheſion.

For where the Blood is moved with the ſame Velocity, the Quantity of the Doſe muſt be as the Degrees of Coheſion, and if the Degree of Coheſion were the ſame, the Quantity of the Doſe muſt be reciprocally as the Velocity; and therefore, where

 neither

neither Coheſion, nor Velocity, are the ſame, the Quantity of the Doſe muſt be in a Proportion compounded of the direct Proportion of the Degrees of Coheſion in the Parts of the Blood, and a reciprocal Proportion of its Velocity: But the reciprocal Proportion of the Blood's Velocity is equal to the direct Proportion of its Tenacity, or Degrees of Coheſion. Wherefore, the Quantity of the Doſe, neceſſary to be given, is in a Proportion compounded of the Degrees of Coheſion, and the Degrees of Coheſion, *h. e.* the Doſes to be given, are in a duplicate Proportion of the Degrees of Coheſion, or as the Squares of theſe Degrees. Q. E. D.

PROP. II.

The Quantity of the Doſes to be given to Perſons of different Quantities of Blood, and which have different Degrees of Coheſion, is as the Weights of the Perſons, and the Squares of the Degrees of Coheſion in the Blood conjunctly.

For where the Degrees of Coheſion are the ſame, the Quantity of the Doſe is as the Weight of the Perſon; and where the Weight of the Perſon is the ſame, the Quantity

tity of the Doſe is as the Square of the Degrees of Coheſion; and therefore, when neither remain the ſame, the Quantity of the Doſe muſt be in a Proportion compounded of the Weight of the Perſon, and the Square of the Degrees of Coheſion. Q. E. D.

Coroll. Hence knowing the Quantity and Quality of the Blood in any Perſon, it is eaſy to determine the particular Doſes neceſſary for either purging or vomiting him to a certain Degree. This Quality, or Temperament of the Blood, is eaſily determined by a skilful Phyſician from the Pulſe, Urine, and other Secretions; and therefore a Phyſician, by Obſervation on the Doſes neceſſary to purge Perſons of a certain Conſtitution, may from thence determine the Doſes requiſite for Perſons of any other Temperament, or Conſtitution.

Schol. What is already demonſtrated would follow, in general, from the common Hypotheſis of Phyſicians, about Purging and Vomiting; becauſe the Diſpoſition the Stomach and Inteſtins have to be ſtimulated is, as the mentioned Degrees of Quantity, and Coheſion of the Blood. So the Thing is evident, even upon that Suppoſition, though it has not the Simplicity of a Poſtulatum, and was omitted on that Account.

The Practice of Purging and Vomiting Medicines, according to Dr. COCKBURN's *Solution of his Problem, with Tables shewing their Doses in particular Ages and Constitutions.* *By.* W. COCKBURN, M. D.

BY my Solution of the Problem for determining the due Doses of purging and vomiting Medicines, in all their Cases, it is manifest in general, that these Medicines operate either upon the Account of their being mixed with the Blood, or by their stimulating the Stomach and Guts. 2. That this their Operation is more or less, according to the Quantity and Thickness of Blood, *h. e.* a greater Quantity, and the thickest Blood, require the greatest Doses: And 3. That when the Quantities of Blood are the same, the Doses of purging and vomiting Medicines are in a duplicate Proportion

Phil. Trans. No. 303.

Postul.

Schol.

Cor. 1.

Prop. 1.

portion of the Blood's Thickneſs. As alſo, that in every Caſe theſe Doſes muſt be in a Proportion compounded of the Quantity of Blood, and thoſe Squares of its Thickneſs.

Prop. 2.

Why the Doſes of Medicines ſo hard to be found.

Now ſince the Operations of purgative and vomitive Medicines depend ſo much on the Quantity and Viſcidity of the Blood, which have not been duly conſidered before; it is no Wonder that the Practice of Phyſick, in theſe Evacuations has been ſo uncertain, and that the more expert Phyſicians, from their moſt accurate Obſervations, could never determine the true Doſes of Medicines, which alter ſo much according to their various Subjects they work upon; they not being acquainted with the true Method of determining either the Quantity of the Blood, or the Degrees of its Thickneſs.

Becauſe Experience is equally the Foundation and Touchſtone of all Reaſoning in Phyſick, we will here ſubmit our Solution to common Obſervations, and try whether every thing propoſed in it, does not exactly anſwer Matters of Fact, and the viſible Operations of Nature.

The different Effects of theſe Medicines upon the account of their Forms.

Firſt then, it plainly follows, that theſe Medicines always purge beſt and moſt conſtantly in a liquid Form; becauſe they are more eaſily conveyed into the Blood, and can

TABLES,

Shewing the Doses of purging and vomiting Medicins according to the Solution of Dr. COCKBURN's Problem.

	Medicins	Ages.	Constitutions.	Doses ℥.	ʒ.	℈. Gr.
Medicins whose common Dose is ℥i.	*Cassia.*					
	Catholicon	16	2	3	1	$13\frac{1}{3}$
	Diacarthamum.		3	8	0	0
	Elect. lenitivum.		4	14	0	$13\frac{1}{3}$
	Succus radic. Irid.					
	---- *Fumariæ.*	9	2	2	2	0
	Syrup. de Rhamno.		3	6	0	0
	---- *de Pomis magis.*		4	10	2	0
	---- *Rosar. cum Helleb.*	6	2	1	2	$6\frac{2}{3}$
	Tamarind.		3	4	0	0
	Sal cathartic. amar.		4	7	0	$6\frac{2}{3}$
	--- *Mirabile.*					
	Mann. ℥ij.	3	2	0	2	$13\frac{1}{3}$
	Emetica		3	2	0	0
	Vin. emeticum, seu Bened. Suc. Asari. Senecionis.		4	3	1	$13\frac{1}{3}$
		16	2	1	2	$6\frac{2}{3}$
			3	4	0	0
			4	7	0	$6\frac{2}{3}$
Common Dose ʒi.	*Confectio Hamech.*					
	Elect. Caryocostin.	9	2	1	1	0
	Diaphœnicon.		3	3	0	0
	& succo Rosarum.		4	5	1	0
	Emet.	6	2	0	2	$13\frac{1}{3}$
	Syrupus emeticus.		3	2	0	0
			4	3	1	$13\frac{1}{3}$
		3	2	0	1	$6\frac{2}{3}$
			3	1	0	0
			4	1	2	$6\frac{2}{3}$

	Medicins	Ages.	Constitutions.	Doses ℥.	ʒ.	℈. Gr.
Common Dose ʒi.	*Agaricus.*					
	Aloe.	16	2	0	1	$6\frac{2}{3}$
	Carthamus.		3	1	0	0
	Ebuli sem.		4	1	2	$6\frac{2}{3}$
	--- *Cortex.*					
	Hermodactyli.					
	Mechoacanna.	9	2	0	1	0
	Pil. Aggregativæ.		3	0	2	5
	--- *Coch. major.*		4	1	1	0
	--- *Fœtidæ*	6	2	0	0	$13\frac{1}{3}$
	--- *sine Quibus.*		3	0	1	10
	Pulv. Diasennæ.		4	0	2	$13\frac{1}{3}$
	Rhabarbarum.					
	Soldanella.	3	2	0	0	$6\frac{2}{3}$
	Senna.		3	0	0	15
	Turbith.		4	0	1	$6\frac{2}{3}$
Common Dose ʒi.	*Jalappa.*					
	Juli juglandis.	16	2	0	0	$13\frac{1}{3}$
	Lap. Lazuli.		3	0	1	10
	--- *Armenius.*		4	0	2	$13\frac{1}{3}$
	Opoponax.	9	2	0	0	10
	Pil. Coch. minor.		3	0	1	$2\frac{1}{2}$
	--- *de Gut. Gamandrâ.*		4	0	2	0
	---- *Rudii.*	6	2	0	0	$6\frac{2}{3}$
	Pul. Warvicensis.		3	0	0	15
	Sagapenum		4	0	1	$6\frac{2}{3}$
	Emet.					
	Rad. Ipecacuana.	3	2	0	0	$3\frac{1}{3}$
			3	0	0	$7\frac{1}{2}$
			4	0	0	$13\frac{1}{3}$

	Medicins	Ages.	Constitutions.	Doses ℥.	ʒ.	℈. Gr.
Common Dose ℈i.	*Resina jalappæ.*	16	2	0	0	$8\frac{8}{9}$
	Extr. rhabarbari.		3	0	1	0
	Pil. de Hermodactylis ℈ij.		4	0	1	$15\frac{5}{9}$
	pulv. Cornach. ℈ij.	9	2	0	0	$6\frac{2}{3}$
	Emet.		3	0	0	15
	Gilla vitrioli.		4	0	1	$6\frac{2}{3}$
		6	2	0	0	$4\frac{4}{9}$
			3	0	0	10
			4	0	0	$17\frac{7}{9}$
		3	2	0	0	$2\frac{2}{9}$
			3	0	0	5
			4	0	0	$8\frac{8}{9}$
Common Dose Gr. VI.	*Colocynthis.*	16	2	0	0	$2\frac{2}{3}$
	Euphorbium.		3	0	0	6
	Esulæ Cortex.		4	0	0	$10\frac{2}{3}$
	Elaterium.	9	2	0	0	2
	Gum. Guttæ.		3	0	0	$4\frac{1}{2}$
	Gran. Gnid.		4	0	0	8
	Ricini sem.					
	Scammon.	6	2	0	0	$1\frac{1}{3}$
	Tr. Alhand.		3	0	0	3
	Emet.		4	0	0	$5\frac{1}{3}$
	Croc. Rulandi.	3	2	0	0	$\frac{2}{3}$
	Turbith mineral.		3	0	0	$1\frac{1}{2}$
			4	0	0	$2\frac{2}{3}$
Common Dose Gr. III.	Emet.	16	2	0	0	$1\frac{1}{3}$
	Hep. Antimonij.		3	0	0	3
	vitr. Ant.		4	0	0	$5\frac{1}{3}$
	Merc. vitæ.	9	2	0	0	1
	Tart. emet.		3	0	0	$2\frac{1}{4}$
	Merc. præc. per se		4	0	0	4
	---- *solar.*	6	2	0	0	$\frac{2}{3}$
	---- *ruber.*		3	0	0	$1\frac{1}{2}$
	Hercules Bovij.		4	0	0	$2\frac{2}{3}$
		3	2	0	0	$\frac{1}{3}$
			3	0	0	$\frac{3}{4}$
			4	0	0	$1\frac{1}{3}$

Ge. Nattina Sculp.

can ſtimulate more Parts, and that upon the Account of this their Fluidity; whatever may be the Way that Purges and Vomits work, or whatſoever their Nature may be. This explains very eaſily a very common Obſervation, hitherto very difficult to Phyſicians, about the different Operation of the ſame Medicine in different Forms. Why, *viz.* the Infuſion of a due Quantity of a purging Medicine produces its Effects ſooner and more conſtantly than a like Quantity of the ſame Medicine in a Powder, tho' ſtill more conſtantly in a Powder than a Bolus, tho' ſtill ſooner and more conſtantly in a dry Bolus, than if it be given in Pills made into that Form with Gums that do not purge; and this Difference in purging ſhall even be notable, according to the Diſſolubility of the Gums.

From whence it follows, that the Evacuation made by ſuch Medicines, is in Proportion to the Quantity of thoſe Medicines that happens to be diſſolved, and not to the Quantity adminiſtred.

Secondly, That purging by Draughts is the moſt excellent Form, and will always have the moſt conſtant Effect.

Their Effe different, cauſe of t different thickneſs Blood.

The next Conſideration is, that a certain Quantity of any purging Medicine affects us after a different Manner, according to the different Quantity and Conſtitution of the

Blood, or its Thickneſs, and it was ſhewn in the Solution, that if its Thickneſs were the ſame, the Doſe ſhould always be as its Quantity, but the Blood differing likewiſe in Thickneſs, the Doſes of purging and vomiting Medicines muſt be augmented on Account of its Thickneſs. This is perfectly well confirmed by daily Experience, where we find that, People ſick with a manifeſt Thickneſs of Blood, as in Dropſies, the Jaundice, *&c.* take far greater Doſes than they did at any other Time, when they were not ſick, or in that Manner.

By a further Diſquiſition into this Matter, we find that the Doſes muſt not only be greater, where the Thickneſs of Blood is greater; but that they muſt be encreaſed in a duplicate Proportion of their Viſcidity. This is evident by the Tables in *Caſſia, viz.* 9 : 8 ℥ : : 4 : 3 ℥, 1 ℈, 13 $\frac{1}{3}$*gr.* and therefore *alternando* 9 : 4 : : 8 ℥ : 3 ℥, 1 ℈, 13 $\frac{1}{3}$*gr.* Therefore the Doſes are as the Squares of the Conſtitutions. So likewiſe 9 : 8 ℥ : : 16 : 14 ℥, 13 $\frac{1}{3}$*gr.* and *alternando* 9 : 16 : : 8 ℥ : 14 ℥, 13 $\frac{1}{3}$*gr. h. e.* the Doſes are as the Squares of the Conſtitutions.

The ſame is true in any other Conſtitution beſides the mean: For Example, in the loweſt and higheſt 4 : 16 : : 213 $\frac{1}{3}$*gr* : 853 $\frac{1}{3}$. So that by this means we are not only led directly to a right Uſe of theſe Medicines, and

and are able to find the true Cauſe why the ordinary Doſes produce ſo very different Effects in different Conſtitutions; but likewiſe,

The Quantity of Blood in any Perſon being given, together with the ordinary and extraordinary Effect of a Doſe of a purging Medicine, the Change of that Perſon's Conſtitution, and the Nature of that Change may be determined. A Problem

It cannot but be a great Satisfaction to the Mind to find a Doctrine founded on a few ſimple Experiences leading us into the Cauſe of many more that are very complex'd, difficult, and obſcure; which is ſufficient to prove its Conformity to Nature. But my preſent endeavour being to rectify the common Practice of theſe Medicines by this Doctrine, I ſhall frame, by this Method, Tables of the purging and vomiting Medicines in preſent Uſe; better adapted to Experience than are hitherto to be found. *This Doctrine true because conform to Nature.*

The Method of framing ſuch Tables, is by ſetting off the practicable Conſtitutions in the different Ages that I have obſerved to take notable Quantities of purging and vomiting Medicines; ſo that by comparing theſe Conſtitutions with the Ages, we have the different Doſes in all thoſe Caſes, which is all that is required for a better Practice; tho' a more proper Occaſion may produce a more nice and exact Diviſion of Conſti- *How they are made.*

tutions, very much to the Advantage of the Practice of Physick in all Diseases.

The Ages wherein these different Doses are taken, I find to be four; when a Man is about sixteen or twenty Years of Age, and weighs about twelve Stone, he then takes the common Dose: One of nine Years takes three Quarters of that; one of six the Half, and one of three Years, a Quarter. Moreover, it having already been shewn, that the notable healthy Constitutions are but three, as also the notable Pulses of each of these: Let then these Constitutions be as 2, 3, 4. That of the most fluid Blood as the first Number, and so on; in that Case, the Dose of any Person will be found by multiplying the common Dose for his Age, into the Square of his Constitution, and dividing by the Square of the middle Constitution. For Instance, if ʒj. *Cassiæ* is the common Dose, or the Dose of the middle Constitution, ʒiij. ℈j. and *gr.* 13 $\frac{1}{3}$ is the Dose of the first Constitution, and ʒxiv. *gr.* 13 $\frac{1}{3}$ that of the grossest or last Constitution; and so proportionably for every Medicine in all the Ages, as appears by the Tables.

con. im. p. 51. lioth. A- om. p. 24. m. 2.

This Method seems to answer so exactly, that there is not any Thing necessary besides; except a Person is more loose or costive than ordinary (which may be known from the Patient, or otherways) it is to be reputed

nly Exption.

reputed the ſame, as if he had taken an equivalent Quantity of a Medicine proper to produce theſe Effects. Any Phyſician who has conſidered this Caſe in ſome People, after fluxing, will allow the Juſtneſs of this Exception.

As vomiting Medicines have the ſame common Doſes with thoſe that purge, they admit alſo of the like divided Doſes; which, therefore may be found by the ſame Tables. Only, as People that are more coſtive than ordinary, require a proportionably greater Doſe of a purging Medicine; ſo they require their Doſe of a vomiting Medicine to be conſiderably leſs, as is very well known in hot Countries. *The Doſes of vomiting Medicines.*

But it muſt be obſerved, that in the Tables, *Age* ſtands inſtead of *Quantity* of *Blood*; becauſe they encreaſe pretty equally, and it makes the Practice more eaſy to ſuch as are not accuſtomed to Weights and Numbers. *Note* 1.

The more Skilful are deſired to obſerve, that the mean Ages, multiplied into the mean Conſtitutions, give Doſes more nicely. 2.

The TABLES.

Some Inſtances ſhewing the Defects of the preſent Practice, and how mended by the foregoing Tables.

The Doſes of the foregoing Tables, ariſing from Calculation, agree perfectly well with

with tke common Obſervation of the beſt Authors; tho' their Obſervation is very general and ill made, if we except the very firſt Steps. For Inſtance, Authors of all Countries, *Engliſh*, *Dutch*, *German*, *Italian* and *French*, reckon the Doſes after the ſame Manner; whereas, if they had been obſerved, they muſt have been different as are the Conſtitutions of Men in the different Countries.

Authors copy, but do not obſerve.

II. The Defect of their Obſervation is manifeſt by the diſproportioned Doſes of ſome Medicine, their high Doſes being ſometimes double and ſometimes triple, and more of their low Doſes, which is not conformable to Nature; for, let the low Doſe be what it will, the high Doſe of one Medicine muſt always bear the ſame Proportion to the high Doſe of another, as did the low Doſes, *viz.* even in Manna, they reckon it from ʒj. commonly to ʒiij. and ʒiv. If it is ſaid that the firſt Doſe is the loweſt Doſe that is taken by a Man of a due Age, it is neither true in Fact, nor conform to their own Way of reckoning: For Inſtance, Rhubarb is ſaid to be taken from ʒj. to ʒij. No Body will ſay that this is the loweſt Doſe taken by a Man of a due Age, as formerly; becauſe it is not in Fact true, nor that the high natural Doſe is ʒß; for as I ſaid before, if ʒj. of Manna, and ʒj. of Rhubarb are the reſpective low Doſes, then ʒiv.

and ʒij. cannot be the reſpective high Doſes. As to what concerns ſome extraordinary Doſes given by themſelves, and far exceeding the ordinary Doſe, it is eaſily accounted for by the Solution. There are many Examples of this Nature: Turbith, *viz.* is commonly reckoned among them from ʒj. to ʒij; yet *Marggravius*, and good Authors, have given it to ʒiv. So *Colocynthis* from *gr.* vi. to *gr.* xij. and *Fulgin. Fernel. Duncan.* ſay they have given it to ʒß.

III. Authors have been far from being exact; for they have only dos'd theſe Medicines for People of full Age; but have left the Doſes of the different Ages in Silence; nor have they told us at what Time a Man takes his higheſt Doſe, or how that alters in the Growth and Decline of Age; which is ſtill a very great Difficulty for the moſt experienced Phyſicians to manage. *They have only given the Doſes for Men at full Age.*

IV. Their general Method is founded in a Miſtake; their loweſt Doſe being really the common Doſe taken by the Generality of Men, which produces a Multitude of Errors in the Practice. This is manifeſt in their doſing every Medicine. *Their way of determining Doſes falſe.*

V. The mentioned Caſe is more manifeſt by theſe Tables, and it is two to one but that a Phyſician over-purges, or under-purges, any Perſon in Health; and if more Caſes in Sickneſs are ſuppoſed, the Odds will *This ſhewn particularly.*

will encreaſe proportionably. Experience confirms this exactly: For if the middle Doſe is given to one of the loweſt Conſtitution, and the middle Doſe is to purge ſeven or eight Times; in that Caſe, the Perſon of the loweſt Conſtitution is purged near twice as much as he ought to be; and if given to one of the higheſt Conſtitution, he is purged but half of what he ſhould be. But if the Doſe of the higheſt Conſtitution is given to one of the middle Conſtitution, he is purged twice as much as he ought to be; and if given to one of the loweſt, he is purged four Times as much, or about thirty Times, as we find true by daily Experience. But if the Quantity of Blood, the Age, or Sickneſs contribute to the Error, it may prove fatal. If this Conſideration were illuſtrated by a proper Number of Examples, we ſhould find ſome hundreds of, otherways unavoidable, Miſtakes now prevented, by the Practice of theſe Tables.

Theſe Tables ſhew the Doſes of Children may overpurge People of full Age.

Laſtly, We may eaſily account, by theſe Tables, for the Doſes of Children overpurging ſome People of good Health, and of due Age; a *Phænomenon* ſo ſurprizing, that the Smallneſs of the Doſe is commonly thought a good Excuſe for the Miſtake.

FINIS.